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SUPERSTITIONS AMONG SCOTTISH COLLEGE GIRLS

By Russell L. Gould

It was the writer's good fortune, while serving in the Army of Occupation, to be sent to the University of Edinburgh, at Edinburgh, Scotland, for the Spring Term of 1919. In all, some 2,000 men were sent to the different British Universities. One of the purposes was to enable men whose college work had been interrupted to get back into the atmosphere again after their army service and before their return home.

Just before the beginning of the term, while arranging a course of study, more or less casual reading led to an acquaintance with the interesting and comprehensive report of Dr. F. B. Dresslar, under the title, "Superstition and Education."[1] This gave in detail an account of 7,176 superstitions reported by 875 American men and women students in training for the teaching profession, and suggested a similar study among Scotch pedagogical students. Full acknowledgment is made to this source of the idea.

Dr. James Dreever, head of the Psychology Department at the University of Edinburgh, made the work possible by his enthusiastic coöperation, and acknowledgment is gratefully rendered to him and to his colleagues in Moray House, where the material was gathered. Moray House is the Normal School associated with the University.

The subjects consisted of the students of the 1st and 2nd years in the Psychology department; 377 girls and 7 men took part, but in order to have a uniform group the records of the men have not been included. As each class was visited the instructor made a brief introductory statement and placed the experimenter in charge.

[1] Univ. of California Publications, Education, vol. 5, No. 1; July 1907.

The latter gave a short, informal outline of the work so that the students could do their part with a feeling of friendly interest. Their attitude was most cordial and sympathetic, and the writer feels deeply indebted to them.

Writing paper was passed and the first request made was that no names should be written; the point was emphasized that the work was to be entirely anonymous. This seemed to be quite important and, no doubt, was effective in enabling the students to write much more freely than they would otherwise have done. They were asked to write in order:

1. Age.
2. The two preparatory schools last attended.
3. Whether or not the Full Leaving Certificate had been received.

The average age was 19.7 years.

The names of the preparatory schools were taken in order to know in what part of the country each subject had lived, for as between different sections there are great variations in the whole manner of life. In the North and Northwest the country is mountainous and deeply indented with broad valleys and sea lochs, or bays. There are no towns of any considerable size, the population is scattered, and the census figures show that in the section composed of two of the largest counties, viz., Ross-Cromarty and Inverness, 14.3% of the people speak Gaelic only. The chief occupation is cattle-raising and farming in such time as the short season makes possible. In the southern Lowlands, and in the eastern parts, industries and commerce are important, with a consequent greater density of population. Such differences in environment might have an effect on superstitious belief.

A division in the records was made as between "city" and "country." The former group included one case from London, two from Glasgow, and 101 from Edinburgh and immediate vicinity. These were the only large cities represented. The latter group, with four exceptions from England, came from other parts of Scotland. Every county was represented, including the Island of Skye to the Northwest, and the Orkney and Shetland Islands to the Northeast. It is safe to assume that these subjects, as a whole, represented as typically national a group as it would be possible to get. No others than the exceptions noted gave any indication of foreign birth or residence, although there were undoubtedly a few cases. Migration is much less common than in this country. In all of Scotland in 1901, slightly over 91% were native born.

Possession of the Full Leaving Certificate indicated that the student had completed a certain minimum of required work, which could be used in obtaining a university degree. It implied systematic and successful work and also scholastic expectations; 246 of the 377 had received the Certificate. The record is classified on this basis, indicated by the letters F L C.

After the preliminary data had been written, an instruction sheet was passed to each student. The experimenter read it aloud to insure that it was thoroughly understood. It was seldom necessary to give any amplification and the necessity for uniformity was regarded. The instructions were as follows:

"Beside our religious beliefs many of us hold to certain beliefs or sayings which we cannot always prove. These sayings or beliefs are often called superstitions; they may have a greater or a less effect on the common actions of our daily lives. We do things or say things in order that we may be 'lucky'; certain signs or happenings indicate 'good luck'; others indicate 'bad luck,' etc.

"On the accompanying slip of paper write as many superstitions as you can remember, irrespective of your belief in them or their effect on you.

"In front of those which usually influence your conduct make the Plus sign (+). Make a Question mark (?) in front of those which sometimes influence your conduct, or give rise to any slight feelings which may not be strong enough to influence your conduct. Make the Minus sign (—) in front of those which do not influence your conduct nor affect you in any way."

It should be noted that the Plus mark was used to indicate *influence on conduct,* not belief. Most of us would hesitate to admit *belief* in any superstitions although we may regard some of them very carefully. When an occasion arises we say we "know there is nothing in it, but might just as well be on the safe side," and knock wood or act otherwise accordingly. So to avoid any discussion as to the relation between "belief" and conduct, and to make more definite the meaning of the Plus sign, Influence on Conduct was the criterion used. In neither the written instruction nor in the oral statements was any reference made to a typical superstition, by way of example. Every superstition written depended on the memory of each individual, except when she copied from a neighbor. However it was pointed out that no advantage to anyone and only confusion to the experiment would result from copying and there seemed to be very little of it. Honesty and frankness in the use of the marks was also urged and in support of this the papers were anonymous and the experimenter an

absolute stranger to whom the different handwritings meant nothing.

Fifteen minutes was announced as the time limit for writing as it was found by trial that most students could write almost continuously for that length of time. At the end of that period they were asked to write their attitude toward superstitions in general if they felt so inclined or to explain their reasons for believing any particular one, if any existed. Some of those statements will be quoted for they give a vivid insight into the naïve way that the matter was often regarded.

Before a class was dismissed it was requested to refrain from discussing the work among other students who might subsequently be asked to participate, in order to prevent any preliminary consideration of the subject. How far such discussions occurred, it is impossible to say.

In the tabulation of the marks used, the plus sign and the question mark have been combined; that is, they have been considered alike as indicating affectedness. It would be impossible to say exactly for each subject what finally distinguished between the "+" and "?" that she used, or to determine between individuals the different tendencies to use the more conservative "?."

The total number of superstitions written was 6,038, of which 967 have been classified as different. The plus sign was used in 25% of the cases, the question mark in 23%, and the minus sign in 52%. In other words, 48% of the superstitions mentioned had some effect on the individuals who wrote them. The distribution among the groups is as follows:

	+	?	—
City	23%	22%	55%
Country	25%	24%	51%
With F L C	26%	23%	51%
Without F L C	22%	24%	54%
Total	25%	23%	52%

In the table which follows there are included figures showing the number of individuals affected, by groups. There is also shown the number of superstitions mentioned by those who were affected differently.

TABLE

	City	C'n'try	With FLC	Without FLC	Total
1. Number of Subjects	104	273	246	131	377
2. Av. No. Superstitions Mentioned	14.2	15.7	15.6	15.1	15.4
3. a. Subjects not Affected	10	14	17	7	24
b. Per Cent. not Affected	10%	5%	7%	5%	6%
c. No. Superstitions Mentioned (Av.)	13.8	15.3	14.8	14.6	14.7
4. a. Subjects Affected by Less than Half that they Mentioned	53	113	101	65	166
b. Per Cent. so Affected	51%	41%	41%	50%	44%
c. No. Mentioned (Av.)	13.8	15	14.5	14.8	14.8
5. a. Subjects Affected by Half or more that they Mentioned	41	146	128	59	187
b. Per Cent. so Affected	39%	53%	52%	45%	50%
c. No. Mentioned (Av.)	14.8	16.5	16.6	15.2	16.5
6. Median Age	....	....	19.5	20.5	20.2
7. Average Age	....	....	19.5	20.1	19.7
8. Sigma	....	....	....	....	1.

The total column shows that:

1. Each subject recalled and wrote an average of 15.4 superstitions in fifteen minutes.

2. 94% of all the individuals were more or less affected.

3. Those who were most affected could recall the greatest number.

4. Those who had been educated in the "country" and who presumably had grown up there were more affected than the others and were able to recall more.

To a certain extent it would probably be the case that people who are superstitious would consequently have a larger collection available to their memories than those who are less affected, but in such a group as the present one it would be difficult to say how far there is such a causal relationship, and how far the two conditions of being affected and having an efficient memory are simply the concomitant results from experience.

The superstitions are quoted in the following pages. There is shown the total number of times that each was mentioned, and in detail the number of times that each belief mark was assigned. Statements of identical meaning expressed in different words have been grouped, and a more or less uniform method of expression has been adopted. For example, these three conditional phrases were found, applied to almost any superstition: "If (you wear green)—"; "When (you wear green)—"; "For a (person) to (wear green)—." They have been considered synonymous. Otherwise the statements are quoted as written.

The asterisk (*) before a statement indicates that an identical one was given by American students in the Dresslar report.

Total		+	?	—
	BABY (CRADLE)			
3	To visit new-born baby empty handed—Unlucky.	0	0	3
2	For baby to be born with double crown—Lucky.	0	0	2
4	*To rock empty cradle—Unlucky for baby.....	1	2	1
3	Baby should be carried upstairs before being carried down	0	0	3
1	The nurse should stand on a chair with the baby.	0	0	1
1	To cry over new-born baby—Unlucky.....	0	1	0
1	To wash the palm of a baby's hand washes away his luck	0	0	1
1	*To cut a baby's fingernails will make him a thief.	0	0	1
1	To tickle a child's soles makes him a stammerer.	0	1	0
1	For a child to die unbaptized—Unlucky.....	0	0	1
1	If a child cuts its first tooth on the upper gum it will never marry	0	1	0
1	If a baby is given the name of a recently deceased member of the family it will be unlucky and will probably die soon.....	0	0	1
	BED			
1	To turn the mattress while making a bed—Unlucky	1	0	0
1	To turn a bed on Good Friday—Unlucky.....	0	0	1
1	To sleep in a bed with the head upstream—Lucky	0	1	0
	BIBLE			
1	A Bible as a gift between lovers—Unlucky.....	1	0	0
1	To receive a Bible as a gift—Unlucky.....	0	0	1
	BIRD (BAT, SWALLOW, ETC.)			
6	*For bird to enter house—Unlucky.....	2	1	3
3	If swallows nest in rafters of house—Lucky....	2	1	0
3	Bats flying around a house mean a Death.....	1	0	2
2	If a black-bird taps on the window—a Death..	1	0	1
2	If a bat flies close to you—Unlucky.....	0	0	2
2	If a bird flies against the window—Unlucky....	0	2	0
1	If a bird flies against the window—Sharp news.	0	0	1
1	If a bird enters house by door but not by window—Lucky	0	0	1
1	For sea-fowls to flock round a ship—Unlucky..	0	1	0
1	To throw lady-bird over left shoulder—Lucky..	0	0	1
1	For birds to sit on chimney-pots of a house—Unlucky for inmates	0	1	0
1	To be wakened by birds singing—Lucky.....	0	1	0
1	To kill a bat in the house—Unlucky.....	0	0	1
1	If a bat enters a room, any person there will never marry	0	0	1
1	When birds fly low it is a sign of rain.....	0	0	1

Total		+	?	—
1	When flock of small birds passes overhead, watch them with legs crossed—Lucky	1	0	0
1	If a bird weaves a hair in its nest it is Unlucky for the person to whom hair belongs	0	0	1

BODY

38	*If left palm itches you will receive money if you rub it on wood	14	4	20
17	*If right palm itches you will have an introduction if you rub it on wood	9	0	8
14	*If right ear burns someone is saying evil of you.	3	5	6
14	*If right ear burns someone is saying good of you.	3	5	6
14	*If left ear burns someone is saying evil of you.	4	3	7
12	*If left ear burns someone is saying good of you.	3	4	5
14	If nose itches you will be kissed, crossed or angered	4	3	7
6	If nose itches you will have a pleasant surprise.	1	1	4
5	*Dull ringing in ears means news of a death (Hence the name "Death Bell")	3	1	1
5	*If sole itches, you will have a journey	1	0	4
5	White marks on finger nails, counting thumb as No. 1, indicate No. 1 a friend; 2 a foe; 3 a gift; 4 a beau; 5 a journey to go	1	0	4
3	To shiver when not cold means that a goose is walking over your grave	0	0	3
3	When eyelash comes out place it on hand, blow it off and wish; if you don't see it again the wish will come true	1	1	1
3	Green eyes means Jealousy	1	1	1
2	*Blue eyes mean Faithful and True	1	0	1
1	If eye itches you will have tears	1	0	0
1	To scratch nose—Unlucky	0	0	1
1	To cut finger nails—Unlucky; should be filed	0	0	1
1	Long finger nails mean good character	1	0	0
1	White specks on nails indicate Wealth	0	0	1
1	If nose itches—Unlucky	0	0	1
1	If nose itches—Will hear of a death	0	0	1
1	*Mole on body—Lucky	0	0	1
1	*Red mark on face—Lucky	0	0	1
1	To knock elbow means a pleasant surprise	0	1	0
1	To hurt left elbow means a disappointment	0	0	1
1	*If elbow itches you will have a change	1	0	0
1	To rub shoulders with a person about to be married—Lucky	0	0	1
2	*To put the left foot on the floor first when rising in the morning—Lucky	2	0	0
1	If left ear rings, good news from friend	0	0	1
1	If right ear rings, bad news from friend	0	0	1
2	If right ear burns, your mother is talking of you.	0	1	1
2	If left ear burns, your lover is talking of you	0	1	1
1	*When corns ache it means wet weather	1	0	0

BREAD (BISCUIT, PIE, ETC.)

Total		+	?	—
11	To eat the last piece of bread, or cake, without speaking means a handsome husband	2	5	4
2	To burn hard or old bread—Unlucky	0	1	1
2	When biscuit breaks in three pieces, wish, and the wish will come true	0	0	2
1	To take a piece of bread before finishing what you have means that somebody is keeping something from you	0	0	1
1	To toast bread with a knife—Unlucky	1	0	0
1	If biscuit breaks in three pieces, someone dear to you is thinking of you	0	0	1
3	To break biscuit in three pieces—Lucky	1	1	1
2	If piece of bread falls—A hungry visitor	1	0	1
1	If bread breaks when being cut—A visitor	0	1	0
1	If oatmeal bannock breaks—A visitor	0	1	0
1	To wish when eating first mince-pie of season—Lucky	0	1	0

BRIDGE

23	To go under a bridge when train is crossing—Unlucky	7	2	14
9	To speak while going under a bridge—Unlucky	0	2	7
1	To speak in a tunnel—Unlucky	0	1	0
9	To cross a bridge when train is passing under—Unlucky	1	5	3
5	To turn in middle of bridge—Unlucky	2	1	2
4	For friends to part on a bridge—Unlucky	2	0	2
1	To pass under a bridge and wish—Lucky	0	1	0
1	To walk under a bridge without talking when a train is passing over—Lucky	0	1	0

BRIDE (MARRIAGE, WEDDINGS, ETC.)

32	*Happy is the Bride that the Sun shines on	4	5	23
1	Bride caught in rain—Lucky	0	0	1
25	*Bride should wear: "Something old; something new; Something borrowed; something blue."	2	7	16
22	*To be married in May—Unlucky. "Married in May, rue for aye." "If you marry in May you will live to regret it."	3	6	13
19	*Three times a bridesmaid, never a bride	0	6	13
14	To try on finished wedding dress before the wedding—Unlucky	2	2	10
3	To put on wedding veil before the time of the ceremony—Unlucky	1	1	1
11	For bride to see the groom on the wedding day before meeting at the altar—Unlucky	2	4	5
6	*For bride to look at herself in a mirror after she is fully dressed—Unlucky	0	1	5
5	*"Change the name and not the letter, you change for worse and not for better"	0	2	3
4	*For bride to see a funeral on the way to or from her wedding ceremony—Unlucky	1	1	2

Total		+	?	—
1	If a honeymoon couple meet a funeral on their way to the station, they will not be married more than a year, unless they return and begin the journey again	0	0	1
4	For unmarried girl to try on veil or dress of bride—Unlucky	0	1	3
3	For bride to trip on stairs after ceremony—Unlucky	0	1	2
3	To sleep with wedding cake under pillow—Lucky	0	0	3
3	The first girl to catch bride's bouquet will marry first	0	1	2
2	For the bride to arrive at the church before the groom—Unlucky	0	0	2
2	For sweethearts to be photographed together before marriage—Unlucky	0	1	1
2	*To be married in green denotes unhappiness or sorrow	0	1	1
2	*To be married in green—Unlucky	0	1	1
1	"If the bride sees the groom first she rules the roost, and vice versa"	0	0	1
1	To put married name on linen before the wedding—Unlucky	0	1	0
1	If a girl marries before her elder sister does, the latter wears a "green garter"	0	0	1
1	*To postpone a wedding—Unlucky	0	1	0
1	For bride to see the groom the night before the wedding—Unlucky	0	0	1
1	"Married in red, you'll wish yourself dead; Married in blue, you'll always be true; Married in brown, you'll live in a town."	0	0	1
1	The bride should be carried over the doorstep the first time she enters her new home	0	0	1
1	When a bride first enters her new home an oat-cake should be broken over her head	0	0	1
2	For bride to make her own wedding dress—Unlucky	0	2	0
1	To arrive at church late for a wedding—Unlucky	0	0	1
2	If the groom lets the ring fall, then the bride should wish that she had never been born	0	0	2
1	To be married on the 21st of any month—Unlucky	1	0	0
1	For the bride to wear a friend's marriage veil—Lucky	0	1	0
1	Confetti or rice at a wedding bring luck to the wedded couple	0	1	0
1	For sisters to have a double wedding—Unlucky.	0	1	0
1	A newly-wed couple should leave the church by the same door that they entered	0	0	1
1	For the groom to return to the house for anything forgotten, after putting the bride in a carriage to go away—Unlucky	1	0	0
1	For bride to weep on her wedding day—Unlucky	0	0	1

Total		+	?	—
1	For the groom or his luggage to enter the wrong house by mistake on wedding day—Lucky....	0	0	1
1	For bride to sing at her own wedding—Unlucky.	1	0	0
1	To spot bridal dress with blood—Unlucky.....	0	0	1
1	To shake hands with groom—Lucky.....	0	0	1
1	One wedding is the making of another.....	0	0	1
	CANDLE			
2	For piece of wick to float in grease—Coming of a stranger	0	0	2
1	To see candle burn out—Unlucky.....	0	0	1
1	To see piece of soot on candle wick—Unlucky..	0	0	1
1	To drop lighted candle on way to bed—Your rest will be disturbed.....	0	1	0
	CARDS (FORTUNE TELLING, HAND-READING)			
2	When playing cards move around table same direction as the sun—Lucky.....	0	2	0
1	When playing cards, bad luck often changed by turning any article upside down.....	1	0	0
1	Lucky in cards, unlucky in love.....	0	0	1
4	*Reading fortune from cards	1	0	3
2	To read own cards—Unlucky.....	0	0	2
1	To turn up the ten of diamonds—Money.....	0	0	1
1	To draw three cards at once—Unlucky.....	0	1	0
3	Reading fortunes from hands.....	0	3	0
	CAT			
217	*If black cat crosses path—Lucky.....	50	83	84
36	*If black cat crosses path—Unlucky	6	8	22
8	When black cat crosses your path it is Unlucky unless you spit	1	4	3
2	If black cat crosses path—Death.....	0	0	2
3	If black cat crosses path—Lucky; should it turn —Unlucky	0	2	1
3	If black cat crosses path in morning—Lucky...	1	1	1
1	If black cat crosses path in morning—Unlucky.	1	0	0
2	If black cat crosses path—Lucky except on Friday	0	0	2
2	If black cat crosses path from right to left—Lucky; from left to right—Unlucky.....	0	0	2
1	If black cat crosses path once—Unlucky; twice—Lucky	0	1	0
1	If black cat crosses path back of you—Lucky...	0	0	1
1	If black cat crosses path back of you—Unlucky.	0	0	1
1	To cross path of black cat—Unlucky.....	0	0	1
1	*If black cat crosses path at night—Lucky.....	1	0	0
1	*If black cat crosses path at night—Unlucky....	0	1	0
5	*If a black cat follows you—Lucky.....	1	1	3
2	If a black cat goes the same way you are going—Lucky	0	0	2
3	For any colored cat except black to cross path—Unlucky	1	2	0

Total		+	?	—
1	If a black cat follows a girl she will never marry.	0	0	1
3	To meet a grey cat—Unlucky	0	2	1
31	*A black cat brings Luck	2	12	17
6	*If a black cat enters house—Lucky	0	1	5
4	To turn black cat from the door—Unlucky	1	1	2
2	When cat sits with back to fire—Lucky	0	0	2
4	*When cat sits with back to fire—Rain	0	2	2
1	A black cat in a photograph—Unlucky	0	0	1
1	Affection between a girl and a cat—She will never marry	0	0	1
1	A squealing cat at night denotes death	1	0	0
1	*To take a cat in a flitting—Unlucky	0	1	0
1	To see a black cat in the morning—Lucky	0	1	0
5	*When cat washes face—Rain	1	2	2
1	When cat cries outside window—Unlucky	1	0	0
1	When cat scratches wall—Wind	0	0	1
1	For black cat to enter new house—Lucky	0	0	1
1	If cat dies in house a member of that household will die soon	1	0	0
1	A black cat on a ship—Unlucky	0	0	1
3	A white cat—Unlucky	0	1	2
	CHURCH-YARD			
2	If you walk through church-yard at night bad luck will follow	0	0	2
1	Phantoms may be seen in church-yard at night.	0	0	1
	CLOCK			
2	If clock stops without apparent reason—Unlucky.	1	0	1
1	If clock stops without apparent reason—Death..	0	0	1
1	If clock stops without apparent reason—Illness.	0	1	0
1	When all the clocks in the house stop—Death in the family	1	0	0
1	If clock strikes in church while last hymn is being sung—Death	0	0	1
	CLOTHES (GREEN AND BLACK CLOTHES)			
123	*To put on garment wrong side out accidentally, and not to change it—Lucky	35	32	56
8	*To put on garment wrong side out—Unlucky	3	2	3
2	*To have any part of clothing turned inside out—Lucky	0	0	2
2	To have shower of rain on new hat or dress—Lucky	0	0	2
2	To put on left stocking first—Unlucky	1	1	0
2	*A hole in your stocking means a letter	0	0	2
6	On important occasions wear "Something old, something new; something borrowed, something blue"—Lucky	1	2	3
1	To wear a new garment at examination—Unlucky	1	0	0
1	To wear certain clothes on certain days—Lucky.	1	0	0
1	To get clothes wet on New Year's Day—Unlucky.	0	0	1
1	When shoelace unfastens someone is thinking of you	0	0	1

Total		+	?	—
1	When being fitted by dressmaker, if pins catch in undergarments you will never marry.....	0	1	0
1	To wear anything new until you have "housselled" it to the kirk on Sunday—Unlucky....	0	0	1
1	Anything kept for 7 years will come into fashion.	0	1	0
1	To put on your coat before your hat—Never married	0	1	0
97	The wearing of green clothes followed by mourning	26	21	50
93	The wearing of green clothes—Unlucky.....	25	19	49
1	To be kirked in green—Unlucky.....	0	1	0
1	To sew with green thread—Unlucky.....	0	0	1
2	To wear black when not in mourning—Unlucky.	0	0	2
2	To wear black at a wedding—Unlucky.....	1	0	1
1	To be married in black—Unhappiness.....	0	1	0
4	To try on widow's hat or veil—Unlucky.....	3	1	0
	COAL			
4	To pick up piece of coal in road and carry it home—Lucky	0	1	3
1	If neighbor asks to borrow coal—Unlucky to refuse and Unlucky to take it back.....	0	1	0
	COCK			
27	*If cock crows at night—Unlucky.....	7	10	10
6	*When cock crows in front of door—A visitor..	4	2	0
2	When cock crows three times—Evil or death...	0	0	2
1	When cock crows three times—A visitor.....	1	0	0
2	*When cock crows in morning—A visitor.....	0	2	0
2	When cock crows repeatedly at door—Bad news.	1	0	1
2	When cock crows at door—Lucky.....	1	1	0
1	When cock crows on doorstep—Hasty news....	0	0	1
	COMB			
1	*When comb falls—Unlucky	0	0	1
1	When comb falls—Sign of death.....	0	0	1
1	When comb falls, place foot on it before picking it up to avoid bad luck.....	0	1	0
	COW			
2	When cow licks foreleg or hoof—Death.....	2	0	0
1	A goat should be kept in byre with cows to keep away evil spirits	0	0	1
1	A red dress has bad effect on cows.....	0	0	1
	CUCKOO			
7	To hear cuckoo first time in Spring before breakfast—Unlucky	0	3	4
3	When you hear first cuckoo in Spring, wish, and the wish will come true.....	1	1	1
1	To hear nightingale before cuckoo—Happy marriage	0	0	1
1	To turn money when first hearing cuckoo—Lucky.	0	1	0

DAYS OF THE WEEK

Total		+	?	—
65	To manicure nails on Sunday—Unlucky.....	25	15	25
	*"Cut them on Sunday, refuge may seek, For the Devil will have you the whole of the week." "Better that you had never been born Than on a Sunday have your nails shorn."			
5	To read cup on Sunday—Unlucky.....	1	1	3
2	If you pay out money on Sunday you will be paying out money all week.....	0	0	2
1	To pay out money on Sunday—Unlucky.....	0	0	1
2	To have fortune told by cards on Sunday—Unlucky	0	1	1
1	"A Sunday well spent brings a week of content"	1	0	0
1	To be superstitious on Sunday—Unlucky.....	0	0	1
1	If you borrow on Sunday you will borrow all week	0	0	1
1	Break sticks on Sunday—Unlucky through week.	0	1	0
1	To do school lessons on Sunday—Unlucky.....	0	0	1
1	To have palm read on Sunday—Unlucky.....	0	1	0
1	Break a dish on Sunday, will break 2 more during week	0	0	1
1	Break anything on Sunday there will be breaking all the week	1	0	0
1	To hang out clothes over Sunday or Sacrament time—Unlucky	1	0	0
1	If you have a date for Sunday something will interfere	0	0	1
1	*A person born on Sunday will be lucky.....	0	0	1
2	To cut hair on Sunday—Unlucky.....	1	0	1
1	To do any work on Sunday—Unlucky.....	0	0	1
1	Sunday bargains do not hold.....	0	0	1
2	"The better the day, the better the deed".....	0	1	1
4	*Friday is Unlucky	0	1	3
28	*To begin anything on Friday—Unlucky; it is seldom finished	2	7	19
23	*To cut nails on Friday—Unlucky.....	7	10	6
	"Cut them on Friday, cut them for sorrow."			
10	*To start journey on Friday—Unlucky.....	0	0	10
3	*To flit on Friday—Unlucky.....	1	1	1
2	To cut out dress article or put on new dress on Friday—Unlucky	0	0	2
1	*To marry on Friday—Unlucky	0	0	1
1	Turn mattress on Friday—Illness in house.....	0	0	1
1	If fishermen start out on Friday they will catch nothing	0	0	1
1	To cut nails on Friday is harmful for sailors...	1	0	0
1	If anyone chooses a gift for you on Friday you will be Unlucky on receiving it.....	0	0	1
11	*To start new work on Saturday—Unlucky.....	3	2	6
2	*"Saturday flitting, short sitting".....	1	0	1
1	To have cup read on Saturday—Unlucky.....	0	1	0
1	To play cards on Saturday night—Unlucky.....	0	0	1
1	To cross the Muir of Ord in green on Friday—Unlucky	0	0	1

Total		+	?	—
1	Wednesday is only lucky day to cut nails.....	1	0	0
2	Manicure nails on: *"Monday for health, Tuesday for wealth; Wednesday for news, Thursday new shoes; Friday for sorrow, Saturday see sweetheart tomorrow; Sunday worst day of all"	1	1	0
1	"Monday for health, Tuesday for wealth; Wednesday best day of all; Thursday for losses, Friday for crosses, Saturday no luck at all"..	0	1	0
1	To marry on Thursday—Unlucky.....	0	0	1
1	To cut nails on Tuesday—Unlucky.....	1	0	0
1	To cut nails on Wednesday—Unlucky.....	0	1	0
1	To cut nails on Thursday—Unlucky.....	1	0	0

DAYS OF THE YEAR

36	Fair-haired person as First-Foot on New Year's Day—Unlucky	7	7	22
3	*Fair-haired woman as First-Foot—Unlucky.....	0	0	3
30	Dark-haired person as First-Foot—Lucky.....	5	8	17
19	*Dark-haired man as First-Foot—Lucky.....	7	3	9
30	For First-Foot to be empty-handed—Unlucky.. "Brings poverty for the year."	14	5	11
4	If flat-footed person first-foots you—Unlucky..	2	0	2
1	If old person first-foots you—Unlucky for year.	0	1	0
1	For First-Foot to bring salt red herring—Lucky.	0	1	0
2	If First-Foot is dark person bearing gift, especially coal—Lucky	0	2	0
3	For member of household to cross threshold on New Year's Day before a visitor calls—Unlucky	0	2	1
1	If physician visits professionally on New Year's Day—A year of illness.....	0	0	1
1	To sweep out dust on New Year's Day—Unlucky.	0	0	1
1	To allow anything to rest unfinished at end of year—Unlucky	0	0	1
1	To enter house first time in New Year without eating something—Unlucky	1	0	0
1	To borrow anything on New Year's Day signifies a death in family of the borrower.....	1	0	0
1	To wear something new on New Year's Day—Lucky	1	0	0
1	To allow people to visit you immediately after Old Year's Night—Unlucky	1	0	0
1	To break a glass on New Year's Morning—Lucky.	0	1	0
1	If fire or lamp goes out on New Year's Morning on account of lack of oil—Unlucky.....	0	0	1
1	To break anything first week of New Year—Unlucky	0	0	1
1	On Old New Year's Night if a girl throws a ball of wool over the house, the boy who catches it will marry her.....	0	0	1
3	Tears on New Year's Day mean tears all the year	0	0	3

Total		+	?	—
3	To take down Christmas greens on any night except the twelfth after Christmas—Unlucky.	0	1	2
2	*A green Yule-tide makes a fat Kirk-yard.....	0	1	1
1	Not to have hot cross buns on Good Friday—Unlucky	0	0	1
1	To do a washing on Good Friday—Unlucky....	0	1	0
5	*To wear something new on Easter Sunday—Lucky	1	0	4
1	To be born April 1st—Unlucky.....	0	0	1
1	To wear something new on Whit Sunday—Lucky	0	0	1
4	To change calendar before first of new month—Unlucky	2	1	1
10	To say "Rabbits" on first awakening on first day of month—Lucky.....	2	1	7
2	Rain on St. Swithin's Day—Rain for 3 days....	1	0	1
6	Rain on St. Swithin's Day—Rain for 6 weeks..	1	2	3
2	Rain on St. Swithin's Day—Rain for all Summer	1	0	1
2	To cry on birthday—Unlucky.....	0	1	1
2	Prevailing mood on birthday will prevail through year	0	0	2
15	To wash face in dew on May 1st makes you beautiful	0	1	14
4	At Hallowe'en comb hair in front of mirror at midnight—Face of future husband will appear.	0	0	4
2	At Hallowe'en put two nuts in fire, representing two people—If the nuts jump apart, the people will quarrel	0	0	2
1	At Hallowe'en if girl pulls cabbage blade she may see kind of man she will marry,—long, short, etc.	0	0	1

DEFORMITIES

4	To be looked at by squint-eyed woman—Unlucky	0	2	2
2	To counteract, touch wood and count 10.....	0	1	1
1	To begin day by meeting cross-eyed woman—Unlucky	0	0	1
1	To meet squint-eyed person—Unlucky.....	0	0	1
1	Squint-eyed man—Lucky	0	1	0
1	If squint-eyed person talks to you—Lucky.....	0	0	1
1	If cross-eyed person looks at you, cross your fingers to keep away bad luck.....	1	0	0
2	To meet person with wooden leg—Lucky.....	0	0	2
1	To meet man with wooden leg—Unlucky.....	0	0	1
2	To see the back of man with wooden leg—Unlucky	2	0	0
1	To see the front of man with wooden leg—Lucky	1	0	0
1	See a one-legged man and wish.....	0	0	1
1	To touch a hunchback in passing on street—Lucky	0	0	1
1	People with a double crown or crooked little finger will be most successful in life.....	0	1	0

Total		+	?	—
1	If fishermen on way to sea meet flat-footed person—Unlucky	0	0	1
1	To turn around to look at colored man—Unlucky (They are uncommon in Scotland)	0	0	1
	DISHES			
3	To break a dish—Unlucky	0	1	2
1	To break a dish—Lucky	0	0	1
1	To break a pot—7 years bad luck	0	1	0
14	*If you break one dish you are sure to break two more very soon	4	3	7
2	To break a dish on the shelf—Harm to household	0	0	2
1	Two plates accidentally put on the table for one —Lucky	0	0	1
	DOG			
74	*If dog howls or whines at night—Death	19	26	29
2	*To hear dog bark three times during night—Death	0	1	1
2	*To hear dog howl at moon—Bad omen	0	2	0
3	*If dog whines when someone is seriously ill, it signifies the death of that person	1	2	0
1	If dog whines at night there will be misfortune in the house which he faces	1	0	0
1	Dog howling at cross-roads indicates a death	0	1	0
1	If you jump over a dog it will keep you from growing	1	0	0
1	To hear sick people talk of seeing dogs—Unlucky	1	0	0
1	If black dog crosses path—Unlucky	0	1	0
1	*If strange dog persistently follows you—Lucky	0	1	0
1	If a straw or stick hangs from dog's mouth —Visitor	1	0	0
	DREAMS			
7	*"A Friday night's dream on Saturday told, is bound to come true be it ever so old."	3	2	2
7	*Dreams go by opposites	1	2	4
9	*Sleep on wedding cake to dream of future spouse	0	2	7
3	*Dreams often predict the future	2	1	0
3	*To tell dreams before breakfast—Unlucky	1	0	2
1	Before going to bed place shoes in form of T—Will dream of future husband	0	0	1
1	*To dream of birth—Unlucky	0	0	1
2	*To dream of blood—Unlucky	0	2	0
1	To dream of boots—Unlucky	1	0	0
1	To dream of butcher—Unlucky	1	0	0
1	To dream of brother—Unlucky	0	0	1
1	To dream of black cat—Lucky	0	0	1
1	*To dream of cats—Unlucky	0	0	1
4	To dream of a child—Unlucky	1	1	2
2	To dream of being in church—Unlucky	1	1	0
1	To dream of a coffin—Unlucky	1	0	0
1	To dream of crying—Lucky	1	0	0

Total		+	?	—
2	To dream of the dead—Lucky	0	2	0
1	To dream of the dead—Unlucky	0	1	0
1	To dream of the dead—Bad weather	1	0	0
7	*To dream of the dead—Will hear from the living	4	1	2
3	To dream of death—Lucky	1	0	2
4	*To dream of death—Birth	1	1	2
7	To dream of death of person—he will marry soon	0	1	6
1	To dream of death of person—Long life for him	1	0	0
1	To dream of death of person—Unlucky	0	1	0
1	To dream of doctor—Unlucky	1	0	0
2	To dream of dog—Is to dream of faithful friend	0	0	2
1	To dream of dog—Lucky	0	0	1
2	*To dream of eggs—A quarrel	0	0	2
1	*To dream of fire—Speedy news	0	1	0
1	*To dream of garden full of flowers—Death	0	0	1
1	To dream of hay—Unlucky	1	0	0
1	To dream of horses—Unlucky	0	0	1
1	To dream of insects—Is to have enemies	0	0	1
2	*To dream of mice—Unlucky	1	0	1
1	To dream of mirror falling and breaking—Unlucky	0	1	0
3	To dream of minister—Unlucky	2	0	1
1	*To dream of money—Will hear of death of friend	0	0	1
1	To dream of mother, if dead—Unlucky	0	1	0
1	*To dream of pleasant things—Unlucky	0	0	1
1	*To dream of tragic things—Unlucky	0	1	0
3	To dream of rats—Unlucky	2	1	0
1	To dream of red-haired person—Unlucky	0	0	1
1	To dream of red—Vexation	0	0	1
2	To dream of same thing more than once—Will come true	0	0	2
1	*To dream of same person three times in succession on brides cake—Future spouse	0	0	1
1	To dream of sheep—Death in family	0	0	1
1	*To dream of snakes—Unlucky	0	0	1
2	To dream of small animals—Enemies	0	0	2
1	To dream of spider—Lucky	0	0	1
1	To dream of bathing in clear, blue, sea—Lucky	0	1	0
1	If water is full of sea-weed—Trouble	0	1	0
5	*To dream of losing tooth—Sign that dear friend is dying	1	1	3
1	To dream of teeth—Unlucky	1	0	0
1	To dream of going upstairs—Lucky	1	0	0
5	*To dream of wedding—Unlucky	2	0	3
10	*To dream of wedding—Death	3	2	5
	EATING			
2	Being the last to finish eating—Long life	0	0	2
1	To help oneself from a dish passed by another without putting it on the table—Unlucky	0	0	1
1	Last person to rise from table—Never married.	1	0	0
1	*If your chair falls when you rise—Unlucky	0	0	1

FIRE (FIRE-IRONS, STOVE, ETC.)

Total		+	?	—
10	Coal cracking and sparking out of fire—Hasty news	3	2	5
4	Coal sparking out of fire—Coming of stranger..	2	1	1
1	When coal falls from fire—A welcome visitor..	0	0	1
1	*Cracking in fire—A surprise	0	1	0
8	Film of soot hanging from ribs of fire—A visitor.	3	0	5
1	Film of soot on fire bars—Stranger or a letter..	1	0	0
1	To see a "stranger" blowing at the ribs..... (This means the same as the one preceding)	0	1	0
3	Put up poker in front of fire to make it burn better	2	0	1
1	To hold poker in front of fire—Unlucky.....	0	0	1
1	When fire refuses to burn, knock on hearth 3 times to kill witch which prevents fire from burning, then put poker in front of fire to ward off other witches, and fire will burn....	0	0	1
1	Put poker in grate at right angles to ribs to form a cross; this will charm away evil spirits that keep fire from burning.....	0	0	1
1	To cross fire-irons on hearth—Unlucky.....	0	0	1
1	To put fire-irons on a table—Quarrel.....	0	0	1
1	To heat poker red hot—Unlucky.....	1	0	0
1	If a visitor pokes the fire—Bad luck for 7 years.	0	0	1
3	To burn anything green in the house—Unlucky.	0	1	2
1	If fire does not kindle well, your lover is angry over some small matter	1	0	0
1	If fire persists in going out, then Father is angry.	0	1	0
2	Purple flame in fire—Death.....	0	0	2
1	When cinder falls from fire and you shudder, someone is walking over your grave.....	0	1	0
1	When ribs of grate fall out—A warning.....	0	1	0
1	When stove cracks on top—Sign of death.....	0	0	1
1	If fire burns brightly on Monday morning—Good luck for the week	0	1	0
2	When a piece of paper is burning in the fire, wish; if paper goes up chimney, wish will come true	0	2	0

FISH

1	To burn fish-bones—Unlucky.....	0	0	1
1	To have fish for breakfast before examination—Lucky	0	0	1
1	When fishing, to count fish as caught—Unlucky.	0	0	1
1	If a salmon is brought aboard a ship, something strange will happen to the ship.....	1	0	0

FORK (See under "KNIFE")

FOUR-LEAVED CLOVER (WHITE HEATHER, IVY, ETC.)

49	*To find four-leaved clover—Lucky.....	17	18	14
24	White heather—Lucky	7	8	9
3	To find four-leaved shamrock—Lucky.....	1	0	2
1	Four-leaved clover wards off evil spirits and returns lost lover to forlorn maiden.....	0	0	1

Total		+	?	—
1	Find four-leaved clover and wish—Lucky.....	0	0	1
1	A sprig of white heather means a proposal.....	1	0	0
18	To bring hawthorne blossoms into house—Unlucky	2	3	13
4	To bring any spring blossoms into house—Unlucky	0	1	3
2	To bring ivy in house—Unlucky.....	0	0	2
2	A rowan tree near house wards off ill luck.....	0	0	2
	FROG (TOAD)			
1	Frog indicates bad luck	0	0	1
1	Frog enters a house—Indicates a death.....	0	0	1
1	When toad crawls in door—Sign of death.....	1	0	0
	FRUIT			
2	Count fruit-stones to tell year of marriage "This year, next year, sometime, never".....	0	0	2
1	When eating first fruit of the season, wish—Lucky	1	0	0
2	*Unbroken paring of apple thrown over shoulder makes initial of true lover.....	0	2	0
	FUNERAL (THE DEAD)			
6	To watch a funeral through a window—Unlucky	0	2	4
5	*To meet a funeral procession—Unlucky.....	0	2	3
1	If going on outing and you meet a funeral it is a sign of misfortune and you should turn back.	0	0	1
3	To meet funeral on way to or from a wedding—Unlucky	0	1	2
1	To meet funeral on wedding day—Unlucky.....	0	0	1
1	To meet three funerals in succession—Unlucky.	0	1	0
2	To turn around to look at a funeral—Unlucky..	0	1	1
1	If two funerals meet each other—Another death.	1	0	0
1	To cross street in front of funeral—Death of relative within six months	1	0	0
4	*To cross road in front of hearse—Unlucky....	0	1	3
1	To meet hearse on way to funeral—Lucky.....	0	0	1
2	To meet empty hearse from funeral—Unlucky..	0	0	2
1	A hearse should avoid running water—To go over it is unlucky.....	0	0	1
1	To say ill of the dead—Unlucky.....	0	0	1
3	"Blessed is the corpse which the rain falls on".	0	0	3
4	*After a death two others follow, usually relatives	1	2	1
1	*A supple corpse indicates that death will soon come again	0	1	0
1	To visit corpse without touching it—Unlucky...	0	1	0
1	If corpse lies over Sunday, 3 deaths will follow.	0	0	1
1	Opening the door of the house to let the soul of the dying person escape	0	0	1
1	A birth in certain families is always followed by a death	1	0	0
1	If coffin is too short—More misfortune.....	0	1	0
1	Before coffin is ordered at undertakers, strange knockings are heard	0	1	0

Total		+	?	—
	GATE			
1	To wish with left hand on top bar of 5-barred gate—Lucky	0	0	1
1	Go through wishing-gate and wish—Lucky	0	0	1
	GLOVE			
80	To pick up glove which you have dropped—Unlucky; it means a disappointment	23	18	39
52	To pick up another's dropped glove—Lucky; it means an introduction	12	14	26
27	To drop a glove—Unlucky; a disappointment	6	9	12
2	To drop a glove—An introduction	1	0	1
	GOOD-BYE (SHAKING HANDS, PARTING, ETC.)			
32	To say "Good-bye" twice—Unlucky	10	7	15
1	To say "Good-bye" twice—Will never see the person again	0	0	1
1	*After saying "Good-bye," to watch person till out of sight—Unlucky	0	0	1
1	When friend leaves on train, to watch train till out of sight—Unlucky	1	0	0
1	To meet friend and not be recognized at first—Lucky	0	0	1
1	To part at running water—Never meet again	1	0	0
1	To part at cross-roads—Unlucky	0	0	1
1	To part at bend in the road—Unlucky	0	0	1
7	To shake hands twice when saying "Good-bye"—Unlucky	2	0	5
12	*To cross hands when shaking hands—Wedding	2	2	8
2	*To cross hands when shaking hands—One of the four soon married	1	1	0
4	To cross hands while shaking hands—Lucky	1	1	2
2	*To cross hands while shaking hands—Unlucky	1	0	1
2	*To shake hands across a table—Unlucky	0	0	2
1	*To shake hands across a stile—Unlucky	0	0	1
	GUEST (VISITING)			
1	If a guest breaks a plate—Luck to hostess	0	1	0
1	If two visitors come a third will follow	1	0	0
1	To visit a house on special occasions—Unlucky	0	0	1
1	To be taken ill away from home—Unlucky	0	0	1
1	To meet flock of sheep on way to make a visit—A welcome awaits you	1	0	0
	HAIR			
1	To board in house with red-haired person—Unlucky	0	0	1
1	To have red hair—Unlucky	0	0	1
1	Red-haired people are deceitful	0	0	1
1	To meet dark-haired person first thing in morning—Lucky	0	1	0
1	To lift hair from someone's clothes—Lucky	0	0	1
1	To keep lock of hair as token—Lucky	0	0	1
1	"Keep hair, keep care"	0	0	1
1	Trim hair in waning moon—It won't grow	1	0	0
1	Hold hair in left hand, pull it between thumb and forefinger of right; if it curls—Lucky	0	0	1

HANDKERCHIEF

Total		+	?	—
1	To drop handkerchief—Disappointment	0	1	0
1	To pick up own dropped handkerchief—Unlucky.	0	0	1
2	To pick up someone else's dropped handkerchief —An introduction	0	2	0

HARE (RABBIT, WEASEL)

6	For hare to scurry across your path—Unlucky..	0	1	5
4	*For rabbit to scurry across your path—Unlucky.	0	0	4
2	To meet hare when setting out on journey— Unlucky	0	1	1
1	To meet hare when cycling—Unlucky	1	0	0
1	For weasel to cross path—Unlucky	0	0	1

HORSE

22	*See a white horse and wish—Lucky	1	7	14
1	See a white horse and wish—Wish will come true if horse wags its tail	0	0	1
3	See a white horse and spit—Lucky	1	1	1
3	See a white horse and wish—Wish will come true if you don't look at horse again	0	1	2
1	See white horse's tail and wish	0	0	1
9	*To see a white horse—Lucky	1	1	7
1	To bow to white horse first time you see it— Lucky	0	0	1
2	First in crowd to see white horse—Lucky	0	1	1
1	When you see a white horse, make a cross on your shoe with finger—don't look at horse again—Lucky	0	0	1
1	To see white horse first thing on Friday morning—Unlucky	0	0	1
2	To run in front of white horse—Lucky	0	0	2
1	Count 100 white horses—First gentleman you see after that will be your husband	0	0	1
3	To meet piebald horse—Lucky	1	1	1
1	When you see speckled horse, touch cold iron— Lucky	0	0	1

HORSE-SHOE

64	Horse-shoes are lucky	27	16	21
24	*A horse-shoe nailed points up over door—Lucky.	6	6	12
6	*A horse-shoe nailed points down over door—Unlucky	0	1	5
3	*To find horse-shoe lying with points toward you —Lucky.	3	0	0
1	*To find horse-shoe lying with points away from you—Unlucky	1	0	0
6	*Find horse-shoe and throw it over left shoulder —Lucky	1	2	3
2	Find horse-shoe and throw it over left shoulder and wish—Lucky	0	1	1
2	If you find a horse-shoe and throw it away, you throw away your luck with it	2	0	0

Total		+	?	—
1	To pass through door with horse-shoe over it—Lucky	1	0	0
1	*Horse-shoe over door keeps away evil spirits; if it falls—Unlucky	1	0	0
1	*Find horse-shoe, spit on it and throw over head —Lucky	0	0	1
1	*Find horse-shoe with nails in it—Lucky	1	0	0
1	Find horse-shoe nail—Lucky	1	0	0
	HAPPINESS			
1	Happiness always has reaction in sorrow and disappointment	1	0	0
1	If you think too much about something that makes you happy, something will happen to spoil your pleasure in it	1	0	0
1	To receive too many good wishes—Unlucky	0	0	1
	JEWELS			
34	*Opals are Unlucky	11	3	20
18	*Pearls indicate tears	6	1	11
	INSECTS			
4	To kill insect brings rain	2	1	1
2	To kill insect—Unlucky	0	0	2
1	To tramp on insect crawling across your path—Rain	0	1	0
2	*To hear tick of "Death Watch" beetle—Death.	0	1	1
1	To hear beetle in walls of house—Death	0	1	0
1	To hear beetle in house—Unlucky	0	1	0
1	When bees buzz around a house—Death there in 12 hours	1	0	0
1	Flies gather around a house when death is coming	0	0	1
1	*Crickets and mice in house bring prosperity	1	0	0
2	A cricket is a sign of Death	0	0	2
1	*To kill a cricket brings misfortune to house	0	0	1
1	If white butterfly crosses your path or flies over you—Lucky; if colored butterfly—Unlucky	1	0	0
	IRON			
1	See a piece of iron in road, throw over left shoulder and wish—Lucky	0	0	1
1	To touch cold iron before going on sea journey —Unlucky	0	0	1
1	Fishermen touch cold iron at mention of a minister or a pig, to avoid ill luck	0	1	0
	KNIFE (FORK, SPOON)			
7	*To accept a knife as a present without giving a small payment, as ½d. in exchange—Unlucky.	2	1	4
5	*A knife as a present cuts friendship	1	0	4
4	To give a knife to a friend—Unlucky	1	0	3

Total		+	?	—
2	Giving a knife means a quarrel	0	0	2
52	*When a knife falls from the table—Gentleman visitor	15	12	25
3	When a knife falls from the table—Unlucky	1	2	0
1	When a knife falls from the table—Lucky	0	0	1
3	When a knife falls from the table—A disappointment	1	0	2
47	*To cross two knives, or a knife and fork—Unlucky; means a quarrel	7	8	32
1	Two knives on one plate—Unlucky	0	0	1
1	When handle comes off knife—Unlucky	0	1	0
1	To take an examination with a knife in the pocket—Unlucky	0	0	1
28	*When a fork falls—A lady visitor	9	6	13
21	When a spoon falls—A lady visitor	8	4	9
1	*When a spoon falls—A child visitor	0	1	0
1	When a spoon falls—A letter by next post	0	0	1
7	To drop a fork—A disappointment	1	1	5
30	*To have two spoons accidentally in one cup—Marriage	2	8	20

LADDER

294	*To walk under a ladder—Unlucky	110	61	123
5	To walk under a ladder and wish—Lucky	2	1	2
1	To walk under a ladder will stop your growth	0	0	1
2	To walk under a ladder unless someone is on it—Unlucky	1	0	1
1	To walk under a ladder unless you spit—Unlucky	0	0	1
1	To walk under a ladder—cross certain fingers and wish—Lucky	1	0	0

LAMB (FOAL)

14	*In Spring see first lamb or foal with head towards you—Lucky; tail—Unlucky	5	2	7
5	In Spring if first lamb seen is white—Lucky; if black—Unlucky	1	1	3
1	To see new-born lamb and wish—Lucky	0	1	0

LAMP

1	If lamp goes out suddenly—Death in family	0	0	1
1	If mantle falls without breaking globe, leaving room dark—Unlucky	1	0	0
2	Two lamps in same room—Unlucky; 3 lamps—Death	1	0	1

LAMP-POST

3	To go around outside of lamp-post when passing—Unlucky	2	1	0
3	*For two people to separate on account of lamp-post—Unlucky	0	1	2

LAUGH (See "SING")

Total		+	?	—
4	*"Laugh before breakfast you cry before night"	2	1	1
3	*"Laughing in the morning will be crying before evening"	0	1	2
1	*"To laugh at morn is to cry at eve"	0	0	1
3	*Laughing in the morning means crying at night.	0	0	3
3	Too much laughter—Sorrow shortly after	2	1	0
1	Excessive laughter before going to bed—Unlucky	0	0	1
1	To be "fey" is to be sad later on	1	0	0
3	For letters to "cross"—Unlucky	0	0	3
1	For letters to "cross"—Lucky	0	0	1
1	If letter is started more than once—No answer will be received	1	0	0
1	To address envelope up-side down accidentally—Lucky	0	0	1

LARGE BIRDS (OWL, CROW, RAVEN, ETC.)

26	Owl is bird of ill omen	2	8	16
1	To see owl during day—Unlucky	0	0	1
1	To kill an owl—Unlucky	1	0	0
1	To shoot an owl and bring it into house—Unlucky	1	0	0
1	An owl crowing on chimney top—Unlucky	0	0	1
3	One crow—Lucky; two crows—Unlucky	1	2	0
4	One crow, sorrow; two, joy; three, wedding; four, new boy	3	0	1
2	One crow, sorrow; two, joy; three, a letter	1	0	1
1	One crow, joy; two, grief; three, wedding; four, disappointment	0	0	1
1	One crow, joy; two, death; three, letter; four, sorrow	0	0	1
1	Three crows—Unlucky	0	0	1
1	When crow sits on chimney—Death	1	0	0
1	For crows to hover around mast of fishing boat when it sets out—Unlucky	0	0	1
1	When crow sits on house for three successive days it means a death	0	1	0
1	To see two crows sitting together the first thing in the morning—Unlucky	0	0	1
1	When crow sits at your window—Unlucky	0	1	0
1	To hear a crow when someone is seriously ill—Death	0	1	0
1	When you see a crow watch it till it is out of sight or bad luck follows	0	0	1
2	*When bunch of crows flies in one direction—Rain	1	1	0
1	When sea-gull perches on roof—Death	1	0	0
1	To find gull in chimney of new house—Lucky	1	0	0
1	The raven is a bird of ill omen	0	0	1
1	To see 4 magpies—Death of near relative	0	0	1

MASCOTS

Total		+	?	—
25	To wear a mascot or charm: e.g., black cat, broken coin, lucky bean, farthing, etc.—Lucky.	6	10	9
7	To carry a 3 d. piece—Lucky	2	2	3
4	To find a 3 d. piece—Lucky	2	0	2
2	To have three "thrup'ny bits"—Lucky	0	1	1
3	To carry a farthing—Lucky	1	1	1
6	To carry a coin with a hole in it—Lucky	1	2	3
1	Moonstones are very unlucky	1	0	0

MIRROR

93	*To break a mirror—Unlucky	32	15	46
145	*To break a mirror—Unlucky for 7 years	39	31	75
1	To break a mirror—Unlucky for 7 years unless the pieces are kept	1	0	0
1	To break a mirror—Unlucky for 13 years	1	0	0
6	*To hold a young child in front of mirror—Unlucky	0	0	6
16	*For two people to look in mirror at same time—Unlucky	2	3	11

MONEY

6	If money drops when passed between two persons—Lucky	0	0	6
3	To find money—Lucky	2	1	0
1	To find money—Unlucky	0	0	1
3	To give a purse empty—Unlucky	0	2	1
1	To spend a coin given for luck—Unlucky	0	0	1
1	To break a farthing, give half to someone and keep the other half—Lucky	0	0	1
1	To give a 3 d. piece to someone entering a competition—Lucky	0	1	0
1	Throw a silver coin in water (pond or stream) without watching it disappear—Cure for any illness	0	0	1
1	Tying silver coin to tail of cow will protect it from evil-wishing neighbor who might be in guise of small animal	0	0	1
1	Throw a 3 d. piece after anyone starting a journey insures their safety	1	0	0

MONTH

1	July is unlucky for a certain family	1	0	0

MOON

127	*To see new moon through glass—Unlucky	26	34	67
5	To see new moon through glass—Unlucky while moon lasts	1	3	1
2	To see new moon through glass—Unlucky unless you finger coin	1	1	0
2	To see new moon through glass without money in pocket—Soon in need	0	0	2

Total		+	?	—
67	To see new moon with money in hand or pocket —Lucky	11	25	31
51	Turn money at first sight of new moon—Lucky.	14	13	24
11	Turn money and wish at first sight of new moon —Lucky	4	4	3
3	When you first see new moon, if you have no money, bow nine times—Lucky	1	1	1
1	When you first see new moon, turn money three times and curtesy—Lucky	0	1	0
2	When you first see new moon, bow to it—Lucky.	1	0	1
1	When you first see new moon, turn apron and curtesy	0	1	0
1	When you first see new moon, bow three times—Will get all you wish for while moon lasts	0	0	1
2	When you first see new moon, turn money and bow three times—Lucky	0	1	1
1	When you first see new moon, count money—Lucky	1	0	0
1	When you first see new moon, turn garment—Will get present during month	0	0	1
3	*To see new moon first over left shoulder—Lucky.	0	0	3
1	*To see new moon first over left shoulder and wish—Lucky	0	1	0
1	"New moon's mist makes old moon's drift"	0	0	1
1	To see new moon in arms of old moon—Lucky.	0	0	1
1	To see full moon through glass—Unlucky	1	0	0
1	Lunatics are worse when the moon is full	0	0	1
1	A halo around the moon—Unlucky	0	0	1
4	*A ring around the moon—Bad weather	1	1	2
1	New moon lying on its back—Stormy weather.	1	0	0
	MOTH			
9	Moth alights on one's dress—Will receive a letter	1	1	7
4	Moth alights on one's dress—New clothes or a gift	0	2	2
5	If you kill a moth you will receive a letter	1	1	3
	NUMBERS			
125	*13—Unlucky	20	34	71
17	13—Lucky	5	3	9
78	*If 13 sit at table—Unlucky	27	22	29
25	*If 13 sit at table—First to rise will die soon	8	5	12
6	If 13 sit at table—Last to rise will die soon	0	1	5
4	If 13 sit at table—The thirteenth will be unlucky.	1	1	2
2	*If 13 sit at table—They will never meet again.	0	0	2
1	If 13 sit at table—Anyone uninvited will die soon.	1	0	0
1	To live in house No. 13—Unlucky	1	0	0
4	No. 9 is lucky	1	1	2
35	*No. 7 is lucky (Bruce and the spider)	13	6	16
3	Two 7's on tram ticket—Lucky	1	0	2
1	No. 5 is lucky	1	0	0
25	*No. 3 is lucky	8	3	14
1	No. 3 is unlucky	0	1	0

Total		+	?	—
7	*When two attempts have failed, third will be lucky	2	3	2
38	Third to light cigarette from one match—Unlucky	7	7	24
1	To chum in threes—Unlucky	1	0	0
1	"Never two but three"	1	0	0
3	After two unexpected events a third will happen.	3	0	0
1	No. 2 is lucky	1	0	0
1	Odd numbers Unlucky; even numbers Lucky	0	0	1
	PEACOCK'S FEATHERS			
5	Peacock's feathers—Unlucky	1	1	3
10	*To bring peacock feathers indoors—Unlucky	2	0	8
	PICTURE			
78	*When a picture (photograph) falls from the wall—Unlucky; means a death in the family	22	16	40
3	If you are photographed with a man you will never marry him (see also under "Bride")	1	0	2
2	To break a picture frame—Unlucky	0	1	1
2	If a picture falls and is unbroken—Death of the person	0	1	1
1	If a picture falls—Sign of a marriage	1	0	0
2	Deliberately to burn or tear a photograph—Unlucky	1	0	1
	PIG			
1	*For pig to cross path—Unlucky	0	0	1
2	Fishermen will not go to sea if pig crosses path.	0	0	2
	PIN			
137	*To pick up a pin in the road—Lucky; to see it and not pick it up—Unlucky *"See a pin and pick it up, all the day you'll have good luck; * See a pin and let it lie, you shall want before you die." Other endings,—". . . all the day you'll have to cry." ". . . all the day your luck will fly."	33	43	61
3	*To pick up pin if head is towards you—Lucky	1	0	2
1	*To see a pin with the point towards you—Lucky.	0	0	1
2	Pick up a pin, throw it over head and wish—Lucky	0	1	1
1	To pick up pin—Lucky; to throw it away—Unlucky	0	0	1
4	Find a pin and throw it over left shoulder—Lucky	1	2	1
3	To pick up a crooked pin—Lucky	1	1	1
1	To pick up a pin if it is not bent—Lucky	1	0	0
1	To wear black-headed pin—Unlucky	0	0	1
1	A black-headed pin among other pins—Unlucky.	0	0	1

Total		+	?	—
1	To put a black-headed pin in a new garment when making it—Unlucky	0	0	1
5	*When hair-pin falls out your lover is thinking of you	1	3	1
1	*When hair-pin falls out—Loss of love	0	0	1
2	When you see a hair-pin on the floor, step on it and wish—Lucky	1	0	1
1	To see hair-pin on ground points toward you—Lucky; points away from you—Unlucky	1	0	0
3	To pick up hair-pin and throw over left shoulder—Lucky	0	0	3
2	When brooch unfastens—Someone is thinking of you	0	0	2
26	*A pin of any kind as present—Unlucky	8	4	14
1	A pin as a gift is unlucky unless giver first pricks himself with it	0	0	1
9	To receive a pin without making a small payment (½ d.)—Unlucky	3	3	3

RETURNING FOR FORGOTTEN ARTICLE

108	*To return for something forgotten after leaving house—Unlucky	30	24	54
26	*To return for something forgotten, unless you sit down—Unlucky	10	7	9
9	To return for something forgotten, unless you sit down and count 20—Unlucky	5	3	1
18	*To return for something forgotten, after leaving house—Unlucky unless you sit down and count 10	3	5	10
1	To return for something forgotten, unless you sit down and count 9	1	0	0
4	To return for something forgotten, unless you sit down and count 7	1	0	3
1	To return for something forgotten, unless you sit down and count 5	1	0	0
1	To return for something forgotten, unless you turn around three times	0	0	1
1	To return for forgotten article—A disappointment	0	0	1
1	To turn back, especially from church—Unlucky.	0	1	0

RING

41	To try on another girl's engagement or wedding ring—Unlucky, will never marry	5	6	30
11	To wear a ring on engagement finger when it signifies nothing—Unlucky	1	4	6
1	To try on friend's engagement ring and wish—Lucky	1	0	0
2	*To take off or lose a wedding ring—Unlucky	0	0	2
1	To have a ring cut to alter its size—Unlucky	1	0	0

Total		+	?	—
1	Hold your signet ring over a cup of water suspended by your own hair; as it nearly touches the water and knocks against the cup, count the number of knocks. The corresponding letter in the alphabet is the initial of your future husband	0	0	1
1	Person who gets ring from bride's cake soon married	1	0	0
	SALT			
141	*To spill salt—Unlucky	26	25	90
95	*To spill salt—Unlucky; counteract by throwing some over left shoulder	29	22	44
7	*To spill salt—Unlucky; counteract by throwing some over right shoulder	2	2	3
1	Counteract spilled salt by taking a little in hand and waving three times around head	0	1	0
2	Counteract spilled salt by throwing over left shoulder with left hand three times	0	0	2
1	Counteract spilled salt by throwing over left shoulder without looking behind	0	1	0
2	*If you spill salt—Tears equal to number of grains	0	1	1
1	If you spill salt—Unlucky for person toward whom it falls	0	0	1
6	*To pass salt—Unlucky. "Help to salt, help to sorrow"	3	1	2
1	To receive salt on plate—Unlucky	0	0	1
1	To ask for salt—Unlucky	0	0	1
2	*To return borrowed salt—Unlucky	1	0	1
2	To burn salt—Unlucky	1	1	0
1	Burn salt when cooking as a bar against evil	0	1	0
1	If you put salt on the carpet after a visitor leaves the visitor will never return	0	0	1
5	To spill sugar—Lucky	2	1	2
	SAY THE SAME THING			
13	*When two people say the same thing, clasp little fingers, say a poet's name, wish, and it will come true	1	5	7
5	When two people say the same thing—Lucky	3	0	2
3	*When two people say the same thing, wish, and it will be realized	2	0	1
	SHOES (BOOTS)			
89	To place shoes on a table—Unlucky; means a quarrel	15	11	63
1	If lady's shoe is placed on a table she will never marry	0	0	1
1	To place shoes with toes pointing to the door will bring a funeral to the house	1	0	0
1	To place shoes inside the fender—Lucky	0	0	1
15	*To throw old shoes after bridal pair—Lucky	4	5	6
1	When heels come off slipper—Lucky	0	1	0

Total		+	?	—
3	To put left shoe on first—Unlucky	1	0	2
1	To put right shoe on first—Unlucky	0	0	1
1	*To put shoe on wrong foot—Unlucky	1	0	0
1	To put shoe on wrong foot—Lucky	0	0	1
	SING			
66	*To sing before breakfast means crying before night "Sing before 11, cry before 7." "Sing before 7, tears before 11." "Sing before meat, cry before sleep."	12	16	38
1	To sing to the man you love—Unlucky	0	0	1
1	To sing "Auld Lang Syne" before parting—One of the company will die soon	0	0	1
1	To hum "Dead March" from Saul—Unlucky	0	0	1
	SNAIL			
11	When you meet a snail, catch it by the horns, swing it three times around the head and wish, and the wish will come true	1	0	10
2	Catch a snail by the horns and throw it over the shoulder—You will find money when you return to the same place	0	1	1
1	If you kill a snail it will rain next day	0	0	1
	SNEEZE			
13	"One's a wish; two's a kiss; three's a disappointment; four's a letter"	2	7	4
3	"One's a wish; two's a kiss; three's a letter; four's something better"	1	0	2
1	One sneeze brings sorrow; to counteract say, "Bless us"	1	0	0
1	Number of times one sneezes brings corresponding number of letters	0	0	1
3	*"Sneeze on Mondays for danger"	1	1	1
	SPIDER			
34	*To kill a spider—Unlucky	12	5	17
1	"If you want to live and thrive, let the spiders run alive"	0	0	1
1	To kill a spider bring misfortune to a Scotchman.	0	0	1
5	*To kill a spider brings rain	1	0	4
4	A spider brings good luck	2	0	2
1	If a spider crawls on new dress—Lucky	1	0	0
1	A small spider on dress—Wealth if you throw it over left shoulder	1	0	0
3	*Spider on clothes—You will get something new.	0	0	3
1	A red spider on clothes indicates money	0	0	1
1	To destroy a spider's web—Unlucky	0	0	1
	SPIRITISMS, ETC.			
6	A knocking heard at night indicates death	2	0	4
4	Three knocks heard, especially at night—Death.	1	0	3
1	In a certain family death is always preceded by a dull knocking at the door	1	0	0

Total		+	?	—
1	Repeated imaginary knocking at door—Unlucky.	0	0	1
1	If a knocking is heard at night when a person is ill he will live as many days as there are knocks	0	0	1
1	A knocking or tapping during an illness—Death of the patient	0	0	1
1	A mysterious cracking noise in wall—A warning.	0	1	0
1	To imagine hearing someone walking in house—Death	1	0	0
1	To imagine the handle of a door turning—Death.	0	0	1
1	*To imagine hearing a number of clocks ticking or the continual murmuring of crickets—Death	1	0	0
2	*To hear a noise like horses galloping when the wind is howling (Banshees)—Death	1	1	0
3	To imagine a flickering, luring, light—Death in a neighboring family	1	1	1
1	The night before a death, relatives see a strange light in the sky	0	0	1
1	When a person dies a mysterious light shines around the house	0	0	1
1	To see a mysterious light—Lucky	0	0	1
1	When a dear friend dies away from home, the spirit will appear to you	0	1	0
1	If you see a person's "feyness,"—something very like him,—whom you know to be away, some misfortune will soon happen to him	0	0	1
3	*Ghosts	1	1	1
3	*The Evil Eye; a power which certain people have so that if they take a "fancy" to anything belonging to another, the owner will get no good of it	0	1	2
1	Children wear blue to protect them from the Evil Eye	0	0	1
1	*Evil spirits cannot cross running water	0	0	1
1	To walk in zig-zag prevents evil spirits following	0	0	1
1	A pentangle on threshold to keep out evil spirits.	0	0	1
	STAIRS			
58	*To stumble going upstairs—Lucky, soon married.	13	11	34
3	*To stumble going upstairs—Unlucky	0	0	3
1	To stumble going upstairs—An introduction	0	1	0
1	To stumble going upstairs behind one's younger sister—Lucky	0	1	0
1	When two people are going upstairs and one stumbles, the other will be married first	0	0	1
10	*To stumble downstairs—Unlucky	5	2	3
17	To cross on stairs—Unlucky	5	1	11
	STARS			
14	*To see falling stars—Unlucky; death of friend.	0	5	9
1	A shooting star heralds death of king or hero.	1	0	0
1	A shooting star near a big house or castle foretells disaster	0	0	1

Total		+	?	—
4	To see a shooting star—Lucky	0	1	3
3	*To see falling star and wish—Lucky	1	1	1
3	*When seeing first start at night say: "Star light, star bright, first start I've seen tonight; I wish I would, I wish I could, get the wish I wish tonight." Then wish, and it will be realized	0	2	1
2	Count 7 stars for 7 consecutive nights—Lucky	1	0	1
1	Count 7 stars for 7 consecutive nights and wish—Lucky	0	1	0
1	Count 7 stars for 7 consecutive nights—See your fate next day	0	0	1
1	If girl counts the 7 stars of the Plough for 7 consecutive nights, her companion on the 7th night is the man she will marry; if no man, she will never marry	1	0	0
2	Count 9 stars for 9 successive nights—Lucky	0	0	2
2	*Count 9 stars for 9 successive nights—Meet your future spouse on the 10th	0	1	1
	TABLE			
20	If a girl sits on a table she will never marry	0	2	18
18	If a girl sits at the corner of a table she will never marry	1	2	15
	TEA			
1	Accidentally to put an extra cup at tea time—Visitor	0	1	0
1	To forget to put tea in tea-pot and pour out water instead of tea—Unlucky	0	1	0
2	*To forget to put lid on tea-pot—A visitor	1	1	0
1	To taste tea before sugar is put in—Unlucky	0	0	1
12	To put milk in tea before sugar—Unlucky	5	1	6
1	To put milk in tea before sugar—Never marry	0	0	1
1	To put milk in tea before sugar—Brings love troubles	1	0	0
9	To read own tea cup—Unlucky	2	1	6
10	*Cup reading	1	5	4
3	To thank a person for reading your cup—Unlucky	1	1	1
1	To have cup read at breakfast—Unlucky	0	0	1
1	To see tree in tea cup—Prosperity	0	0	1
1	To see flag—Success	0	1	0
1	To see broken ring—Broken engagement	1	0	0
2	*To see tea leaf on top of cup—A visitor	1	1	0
	TEETH			
6	When tooth comes out, put salt on it and throw over left shoulder or one will not grow in again	0	2	4
1	When tooth comes out, burn it in salt—Lucky	1	0	0
1	To count your teeth—Unlucky	0	0	1
1	Space between front teeth—Lucky	0	0	1

Total		+	?	—
1	Space between front teeth—Flirtatious and wealthy	0	0	1
1	Teeth far apart—Unlucky; will travel far from home against your will	0	0	1
	THIMBLE			
1	To find a thimble—Never marry	0	0	1
1	To get thimble in plum pudding—Never marry	0	0	1
1	To get thimble in plum pudding—Will be industrious wife	0	0	1
	THREAD			
3	A thread on clothes denotes a letter	0	1	2
3	To pick white thread from friend's coat—Letter for you	1	1	1
1	To pick white thread from friend's coat—A letter for you and a surprise for her	0	1	0
	TRAVEL			
1	To change carriages on a journey—Unlucky	0	1	0
1	To leave something behind in a strange place indicates that you will return	1	0	0
	TROUBLES			
1	When one trouble comes another is sure to follow	0	0	1
1	Troubles never come singly	0	0	1
1	To associate with persons always in trouble or difficulty—Unlucky	0	0	1
	UMBRELLA			
18	To drop umbrella—Unlucky	5	5	8
29	To pick up own dropped umbrella—Unlucky	13	4	12
27	To pick up own dropped umbrella—Disappointment	9	8	10
8	If another picks up your dropped umbrella—Lucky	2	1	5
1	If you drop umbrella, pick it up by wrong end to avoid bad luck	0	0	1
93	*To put up umbrella in house—Unlucky	22	20	51
2	*To place umbrella on bed—Unlucky	1	0	1
1	If open umbrella is held over person in bed, he will die soon	0	1	0
	WASHING HANDS			
3	*To wash hands in same water as another—Unlucky	1	1	1
3	*If two people use the same water for washing hands, they will soon quarrel	1	1	1

Total		+	?	—
	WEATHER (See also under Bird, Body, Cat, Days of Year, Insect, Moon, Snail, Spider)			
19	"Red sky at night is the shepherd's delight, Red sky at morning is the shepherd's warning"	8	4	7
2	"Oak before ash, splash; ash before oak, soak"	1	1	0
1	Good weather all week means stormy on Friday.	0	0	1
2	Good weather on Friday means good weather the following week and vice versa	0	1	1
1	Rain before 7, dry before 11	1	0	0
1	Sun dogs in the sky—Bad weather	0	0	1
1	"When the crows fly high a storm is nigh"	0	0	1
1	Blue flame in the fire means snow	0	1	0
1	Washing windows brings rain	1	0	0
1	To knit during a thunderstorm—Unlucky	1	0	0
1	When sheep stand with back to wall—Rain	0	1	0
2	Wild ducks flying over land—Storm	1	1	0
1	To see Aurora Borealis—Unlucky	0	0	1
1	To see "white horses" at sea—Storm	1	0	0
	WELL			
4	To drink at a wishing well and wish—Lucky	2	2	0
1	To drink at a well called after a saint—Lucky	0	0	1
1	To drop a crooked pin in a well called after a saint—Lucky	0	0	1
1	Five miles from Inverness is a "wishing well;" on the first Sunday in May drop a piece of money in the well, tie a rag to a nearby tree, drink the water and make a wish while drinking—Wish will be granted during the year	0	0	1
	WOOD			
34	*After boasting, touch wood to ward off evil	13	12	9
2	Touch wood after expressing a wish—Lucky	2	0	0
	UNCLASSIFIED			
1	To find an empty black bottle—Lucky	1	0	0
1	To pick up a button—Lucky	1	0	0
1	To wear camphor—Lucky	1	0	0
1	If pink is your favorite color you will be an old maid	0	0	1
1	To have anything green in the house—Unlucky.	0	0	1
1	"Coming events cast their shadows before them," especially forecasting death	1	0	0
2	*To enter a house by one door and leave by another—Unlucky	0	1	1
1	After eating an egg from the shell, put spoon through the shell—Lucky	1	0	0
1	To lose a gift from a dear friend—Unlucky	1	0	0
1	Certain people are lucky, and if they are the first to give gifts at birthday or Christmas, more gifts will follow	0	1	0
1	If golf ball rolls off tee when addressing it—Unlucky	1	0	0

Total		+	?	—
1	For farmer to have an unusually good harvest—Unlucky, some member of family will not see another	0	0	1
1	*To meet a hay cart—Lucky	0	1	0
1	*A crowing hen is a warning of death	0	1	0
1	"A whistling maid and crowing hen will always come to some bad end"	1	0	0
1	To stumble as you enter a room—Lucky	1	0	0
3	The first one in a group to see the first male wearer of a straw hat—Lucky	0	0	3
1	To be the first customer at a new shop—Lucky	0	0	1
2	To spill ink—Unlucky	1	0	1
1	To kiss through a veil—Unlucky	0	0	1
1	To count the people in a room—Unlucky	0	0	1
1	*To see your double—Unlucky	0	0	1
3	A material loss is often followed by a death	1	0	2
1	Throw up a stone at random to find a lost object.	0	1	0
1	To congratulate yourself on some event before it happens—Unlucky	1	0	0
1	To find a Rosary—Lucky	0	0	1
1	If a white mouse appears in house—Sign of death	1	0	0
1	To tell unnecessary lie—Unlucky	1	0	0
1	If paper whirls around three times in the wind—Illness in the family	0	1	0
1	In Spring to see first plow going uphill—Lucky; down hill—Unlucky	1	0	0
1	To walk between two posts—Unlucky	1	0	0
1	To be alone when you meet a parson in clerical dress—Unlucky	1	0	0
1	If partridge crosses path—Lucky	0	0	1
1	To make a rhyme accidentally when speaking—Will receive a letter	1	0	0
1	To find anything red—Lucky	0	1	0
1	An aviator should carry a lady's silk stocking	1	0	0
1	When you rise late, everything goes wrong all day	1	0	0
1	To spill milk will bring trouble to the one who spills it	0	1	0
1	*To meet a flock of sheep—Lucky (See also under "Guest")	0	0	1
1	*If you stitch a garment while it is on your body you stitch sorrow to your back	0	0	1
2	To sweep the floor towards the door—Unlucky	0	1	1
1	To prick your thumb when sewing—Unlucky	0	1	0
1	When you find a needle, toss it over shoulder—Lucky	0	0	1
1	When things go wrong at the beginning of a day they will go wrong all day	1	0	0
1	To stumble over anything—Lucky	0	0	1
1	A straw on the floor—A guest	0	1	0
1	When offered sweets it means single blessedness if you take only one	0	1	0
1	Break a wishbone and wish—Wish will be granted to person who gets the larger piece	0	1	0

1	To waken suddenly at night—Lucky.....	1	0	0
1	For anyone to tramp on your heel—Unlucky....	0	1	0
1	If a shark follows a vessel—Unlucky.....	0	1	0
1	Throwing water on a person indicates that that person will be drowned	0	0	1
1	To go through a double or twin tree and wish—Lucky	1	0	0
1	To cross hands holding glasses when drinking a toast—Unlucky	1	0	0
4	*To walk on dividing lines of cement pavement—Unlucky	0	1	3
2	To stand on the "Heart of Midlothian"—Lucky. (A design in the pavement in Edinburgh)	1	1	0
1	If a fisherman met an old woman who wished him "luck" he would not sail that day.....	0	0	1
2	In a family of thirteen the seventh is supposed to be a bit of a genius.....	0	0	2
1	In a certain family the direct line will cease when ivy growing at both ends of a bridge on the estate meet in the middle.....	0	0	1
1	When there is no snow on a certain peak in the Grampians the heir of a well-known family will die	0	0	1
1	When the ivy on a certain bridge meets, something unlucky will happen to the community..	0	1	0
1	The Seer of Brahan in the North of Scotland; he could prophesy by looking through a small stone with a hole in it; was burned to death by Lady Seaforth for saying that her husband in Paris was unfaithful.....	0	0	1

It may be noted that among the 967 different statements 206 are indicated as having been mentioned by American students. Many of the others, however, show some similarity; there are all degrees of resemblance, since a number of the superstitions involve several conditions, any of which may vary, besides the varying consequences.

A number was found to be quite common in Scotland which were either comparatively rare or entirely absent among the American students. They are given here.

Going over or under a bridge while a train is passing.
A black cat crossing path.
Wearing green clothes. (One of the supplementary statements suggests a reason for this.)
First Foot on New Year's Day.
White heather. (A native plant.)
Dropping a glove or umbrella.
Saying "good-bye" twice.
Walking under a ladder.
Seeing new moon first through glass.
Seeing new moon with money in hand or pocket.

Lighting three cigarettes with one match. (Probably popularized by the soldiers.)
Trying on another girl's engagement or wedding ring.
Placing shoes on a table.
Sitting on a table.

Conversely, a number were mentioned by the American students and were uncommon or absent among the Scotch, as follows:

Planting potatoes in the light or dark of the moon.
Cutting hair in new moon. (The masculine element in the American group might be responsible for this.)
Carrying garden tools in the house.
Wishing on a load of hay.
Dropping a dish rag.
An itching nose.
Wishbone.
Counting carriages in a funeral procession.
Visitor entering by front door and leaving by back door.

Aside from the superstitions commented on, it is rather uncertain what causes the others to appear in only one group. None is local in its implication and practically all involve homely situations, not uncommon in either country or city life. It is the American group which shows three or four which might be foreign to a person who had lived only in a large city, viz., planting potatoes, garden tools, load of hay, and possibly front and back door. It might be suggested that those events in the country, where the majority of the Scotch students lived, are too common to attract notice, but it hardly sounds convincing; nor is the suggestion supported by any converse condition.

A further comparison of the two national groups follows:

Percentage of all superstitions which had some effect, the basis of marking being the same—American, 44.9%; Scotch, 48%.

Average number of superstitions mentioned—American, 8.2; Scotch, 15.4.

A few of the typical supplementary statements are given which throw an interesting light on different phases of the subject from an individual standpoint. Some persons indicated a decided disbelief but with a few admitted exceptions, which they naïvely placed in a different category. The difference usually arose from the fact of personal experience, which seemed to brush aside completely any intellectual or logical fallacies which were effective in other cases.

SUPPLEMENTARY STATEMENTS

"My belief in the fact that to dream of a wedding means death is founded on the fact that 10 years ago I dreamed that my father was being married and he died on that very night. He had only been ill three weeks. Again 1916 I dreamed that a neighboring farmer was being married and next day was the person whose lot it was to be the first to open a communication from the War Office telling us of the death in action of my only uncle.

"The belief in the barking of a dog is again founded on the fact that for the three weeks during my father's illness a dog near at hand barked incessantly every evening."

Subject marked Plus, 2; Question, 12; Minus, 11.

". . . I don't think I am more unlucky than others, nevertheless I have found that putting up an umbrella in the house leads to a disappointment. I have experienced that twice."

Subject marked Plus, 1; Question, 4; Minus, 5.

"Formerly I always scoffed at the superstition re 'salt,' but during one week-end we had a very unfortunate occurrence at home. I happened to spill some salt and an old country woman being present, she commenced to prophesy most dolefully. This happened on the Saturday, and by the Monday our family was bereaved."

Subject marked Plus, 1; Question, 2; Minus, 3.

"I am not superstitious generally but in the last example I have mentioned I have found it to be the case in nine out of ten that after wearing a green dress one very often wears a black one. This has happened to myself also."

Plus, 3; Question, 2; Minus, 6.

"I do not believe very much in superstition. The only thing I am really superstitious about is the wearing of green. This is because ever so many people whom I know have worn green and they have always had a relation who died soon afterwards. I have never yet seen one case which has not come true."

Plus, 2; Question, 2; Minus, 10.

"In the case of the picture superstition, I am rather inclined to believe it, as it actually happened that in my own house a picture fell through the night and shortly afterwards we heard of the death of a relation. The same thing happened at a house near my home. A picture fell, and not long after word came that the master of the house had been killed at the front."

Plus, 1; Question, 2; Minus, 7.

"Superstitions I believe to be very silly and to know them does not influence my conduct, unless they particularly strike me. In the case of the two I have marked Plus it is because something unpleasant or dreadful happened after them more than once that I now dread them, and that I believe they influence me."

The two referred to are: "The number 13 is unlucky. I have the greatest horror of this number at exams. If it is given to me I can never do myself justice."

"To dream anything about a child is very unlucky."

Plus, 2; Question, 1; Minus, 6.

"I do not believe in superstitions as I have often found that things supposed to be unlucky have not affected me in any way. The only exception is my belief that bad luck follows sitting 13 at a table. This is supposed to indicate the death of one of the people before the end of one year. I have seen this happen twice, though I am not sure whether to regard it as a mere coincidence or not."
Plus, 1; Question, 1; Minus, 9.

"I do not believe superstitions generally but from my own experience I have reason to believe in No. 7," viz., "Dreams come true when taken contrary."
Plus, 1; Question, 3; Minus, 5.

"I have always got a kind of dread of a picture falling. I had always heard it meant very bad luck, usually a death, and a great friend of the family was killed last year. Just a night or so before word came I had been in his mother's house and one of her pictures fell. Someone said, 'Oh, what bad luck.' Ever after that, in spite of my trying to put it down to coincidence, I cannot overcome that uneasy feeling concerning a falling picture.
"I have often felt the palm of my right hand itching and, though it may be coincidence, shaken hands with a stranger."
Plus, 2; Question, 7; Minus, 8.

"It seems to me that superstitions are based on events which have proved lucky or unlucky to the people to whom they have happened. The superstitions which I have marked 'Plus' have actually 'come true;' which would seem to indicate the truth of them. To many people, however, these same superstitions have not come true and consequently they do not believe in them. The three are: 'It is considered unlucky to turn back, but if the person sits down and counts nine when he has turned back, the unlucky spell is broken.'
"'Thirteen at a table is considered unlucky.'
"'To find a four-leaved clover is lucky.'"
Plus, 3; Question, 3; Minus, 16.

"On the whole I do not believe in very many superstitions. Still there are a few which I have proved to be true sometimes. For instance, take the first one I have marked 'Plus,' 'To wear green is unlucky.' It is often the case that one who wears green wears black next."
Plus, 2; Question, 4; Minus, 6.

"As a rule I don't put any trust in superstitions. With regard to No. 3 I remember distinctly that a black cat crossed the road in front of me on three different occasions before the Leaving Certificate Examinations. Ever since that I have imagined that good luck followed when a black cat crossed the road in front of you." Note.—Subject had the F L C.
Plus, 2; Question, 4; Minus, 11.

"I have noticed that in several examinations at which I wore camphor, I was more successful than usual; therefore, this has come to have rather an influence on me."
Plus. 1; Question. 3; Minus. 10.

"Personally I do not believe in superstitions, nevertheless No. 2 is one which influences my conduct very much simply because on several occasions it has proved true, although not always. Hence, when I see this film of soot I am always very anxious for post time as I am almost certain I will receive a letter and usually I do." "No. 2" is: A film of soot on the bars signifies the visit of a stranger or you are about to receive a letter.
Plus, 2; Question, 6; Minus, 10.

"I am forced to believe in the foretelling of death by the weird howling of dogs at night because the only three occasions I have heard this were followed by the death of a member of our family circle."
Plus, 2; Question, 9; Minus, 11.

"In the case of wearing green I have noticed in my own family about half a dozen times that mournings followed; hence my belief."
Plus, 2; Question, 11; Minus, 10.

"Personally I am not naturally superstitious, but in the case of No. 10 I have found it to come true. I attach no importance to the others at all." "No. 10" is: If a death's bell rings in one's ear, he or she will hear of the death of some friend. If it comes three times in succession, it means the death of some near relation.
Plus, 1; Question, 1; Minus, 9.

Other cases claim the effect of "public opinion;" in substance, "Other people believe this, or act in such a way, so I always do it too," which indeed would cover the most common way that superstitious belief is handed down through the generations.

"I have never really had any reason to believe in those superstitions which I have marked with a Plus, but somehow I have always been led to believe they were unlucky, and I would never intentionally do any of the things said to be unlucky."
Plus, 9; Question, 6; Minus, 5.

"Although I would not say I quite believed in any of the superstitions, still I have heard them said so often that I cannot refrain from believing in a certain way under certain above-mentioned circumstances. For example, if I put on a stocking inside out I would either wear it unturned or put on another pair, but all the same I would not say that the action in any way influenced my fate."
Plus, 9; Question, 2; Minus, 4.

"These superstitions don't really have any effect on me, but knowing that it is unlucky to do certain things or lucky to do other things, I either do or don't do those things."
Plus, 2; Question, 6; Minus, 2.

"I find myself very superstitious owing to my having been born in the Highlands where so many of these superstitions are held to be right."
Plus, 25; Question, 3; Minus, 12.

"I have put a plus in front of the superstition of three soldiers lighting their cigarettes at one match. Several times during the war it has happened that three soldiers have been lighting their cigarettes while visiting us, and not in one single case has one match only been used. This superstition does influence me. I expect it is because men who have been through the horrors of war do not make a fuss about trifles, and one is naturally influenced by their behavior in this matter."
Plus, 1; Minus, 13.

"I'm not superstitious, although I would never go to anyone's house on New Year's morning without something in my hand. The inmates of the house would probably care if I had nothing to show, for hardly anyone first foots in Scotland without having something in their hand. The superstitions I have marked with a plus sign I merely do just through custom or the influence of a friend, not because I believe in them."
Plus, 2; Question, 2; Minus, 19.

"I have a friend who is very superstitious and believes a great many of them. She influences my conduct very much on occasions when those things happen."
"I myself do not put much belief in the supernatural, but rather than risk bad luck I do certain of these things."
Plus, 7; Question, 2; Minus, 7.

"Those which I have marked with a plus are those which I really take notice of, just because my parents and friends do."
Plus, 3; Question, 1; Minus, 5.

Some subjects accept the fact that they are affected without attempting any excuse or reason.

"I am never very sure in my own mind whether I am superstitious or not. I would never be happy unless I touched wood in my above-mentioned superstition. I always have the feeling, 'Well, it's ridiculous, but I may as well make sure for fear the superstition is true.'"

"In general superstitions affect my conduct very little, but nevertheless in violating any of them, feelings usually arise which cause regrets for having done so, just in case bad luck may be the result. These beliefs seem to give a romantic flavor to everyday life which in many cases would seem dull without them."

"Although I have marked some of these with the plus sign I do not implicitly believe in the luck that is supposed to follow. Yet I would have reluctance in breaking them unless it were in a spirit of daring."

"I am not really a believer in superstitions, but I suppose I try to avert evil consequences more by instinct than anything else. I wouldn't walk under a ladder, but I don't really think anything would happen to me if I did."

"If I hear roosters at the dead of night I always experience an uncanny feeling, which I can never throw off, somehow or other. I understand thoroughly that superstition is the result of ignorance, and at home am often laughed at, but there are certain ideas which I can't change."

"The one which has most hold on me is the one about sitting down thirteen at the table. I did it once and one of the party died within the year. I don't believe that the thirteen had anything to do with it; still I was only about twelve when it happened and it left a certain impression on me. I don't know whether it would keep me from doing the same again or not."

"I don't believe it is right to be superstitious and try not to be so, but I am always pleased at seeing a black cat and lack the courage to enter the examination room without my charm, although I don't know where I got the idea."

"On the whole I do not believe much in superstitions and try not to think too much about them, but a very few, such as the one about the ladder, seem to have been rooted in me and I can't get away from it."

Plus, 10; Question, 11; Minus, 9.

"I can hardly say I believe in these superstitions, yet I find myself unconsciously influenced by them."

"I do not personally object to sitting down 13 at table, but nevertheless the idea always persists that something unfortunate may happen."

"I am not at all superstitious. Those beliefs I have marked plus—well, I don't really *believe* in them, but nevertheless if I found a horseshoe, say, I should hang it up at the door of the house or on some wall; I should not pass it and leave it lying on the ground. Also I do not believe that 'the luck runs out of the shoe' if it is hung up open end downwards, but I should rather hang it open end up.

"Again I do not believe that heather brings luck to the person to whom it is given, but if I had some heather and if someone was leaving me to go far away, I should give that person a sprig of heather, 'for Luck.'"

A few take delight in acting counter to superstitions, especially when with a superstitious person. There are apparently a number of different motives involved, more or less complexly interrelated, and without more data it would be impossible to say in any particular case which motive was dominant. There is the spirit of mischief to tease another person in what is regarded as his silly belief; then there is curiosity, and recklessness, and what might be called contrarimindedness, or the tendency to negative reaction to suggestions. An individual's attitude toward superstitions combined with other data about him might be quite effective in a study of his character. The statements made are so brief that we can only wish that the subjects had written longer.

"The only way in which superstitions influence my conduct is to make me do the things that are said to be unlucky."

Plus, 0; Question, 2; Minus, 9.

"I don't believe any of them in any case. They lead me rather to 'go against the luck' just to prove there is nothing in it."
Plus, 0; Question, 0; Minus, 19.

"People have tried to keep me from going under ladders, etc. I did not go for some time, but then sheer curiosity drove me to do it. Then for some time I took a delight in walking under ladders, and I don't think I'm more unfortunate than those who will go a long way out of their road to avoid ill-luck."
Plus, 0; Question, 0; Minus, 23.

"I have no reason for believing in these superstitions except that I had always been told when small that to do these things brought bad luck. Some I have outgrown, such as thinking 13 unlucky (this since I became engaged on the 13th day of a certain month), and walking under a ladder. Usually now I walk under one whenever I see one just to prove that superstition is foolish and futile. If misfortunes are to come keeping away from ladders and 13's won't stave them off."
Plus, 6; Question, 4; Minus, 3.

"I am not at all, generally speaking, superstitious. I have found that though I acted contrary to many popular superstitions I had no better or worse luck than would be my lot if I had adhered to them."
Plus, 2; Question, 5; Minus, 9.

"Personally I do not believe in superstitions because at various times I have found out that some of these I have mentioned do not come true; for example, I always go under a ladder, and it has no effect on me and no bad luck comes."
Plus, 0; Question, 0; Minus, 12.

"When coming in contact with any person I know to be superstitious I try to do things which they deem to be superstitious to show that I do not believe in them."
Plus, 0; Question, 4; Minus, 20.

"I have never attached any importance to these beliefs; I have repeatedly walked under ladders to the horror of my companion."
Plus, 0; Question, 0; Minus, 9.

Some subjects might be called "Opportunists," as they are superstitious according to the possibilities of the occasion.

"My belief in these superstitions depends, to a great extent, on the circumstances in which I am placed at the moment; for example, if I were going to an examination I should certainly believe in numbers 2 and 4." "Numbers 2 and 4" are: If you forget anything and have to return to the house, don't come out again without sitting down for a few minutes.
Good luck if a black cat crosses one's path.

"I cannot say I believe firmly in superstitions, but although it may not affect my conduct it arouses in me certain feelings, especially those which are considered unlucky.
"At any crisis, or if I wanted something to happen very much, I would avoid doing any of those things which are considered to be unlucky and try to do things which would be lucky."

"Although they may influence my conduct in some small way, yet I do not know that I believe in them entirely. For example, if I discover that I have placed my left foot on the floor first I might go back to bed, and rise a few minutes later to place the right one first. At other times if I did such things I would laugh at myself."

These last examples do not come under any of the above groups but seem worth quoting.

"As regards wearing black after green, bottle green was very fashionable during the war while the relatives of so many people were killed. These two circumstances resulted in many people being superstitious in this respect."

"With regard to May dew, early rising makes for health and health is beauty. Perhaps the inference is that if one tastes the pleasures of early rising on May morning, they will not be willing to forego them afterwards."

"Spilling salt at table is believed to date back to the time of Christ. Judas Iscariot spilled salt at table."

"I have put a plus before the saying, 'A Sunday well spent brings a week of content' because your conscience justifies your conduct if well spent."

"Regarding the ladder superstition, I think the reason is that it might fall. At any rate I never pass under one if it is to be avoided and then I forget the incident altogether."
This direct aspect of the question was mentioned a number of times.

"I believe in the pleasant superstitions just enough to feel a thrill of delight. Even though I do not believe it is unlucky to spill salt, it gives me a contented feeling to have counteracted and balanced something, even though it has no existence."

"I am inclined to believe in lucky days and the reverse, but prettygenerally I find that after all it is my own conduct that is the cause of them. Still there are days when everything does go wrong and one sometimes attributes it to some old superstition."

It is unfortunate that we have no data to throw light on the question as to the effect of the war on superstitious belief, for undoubtedly it had some effect. Conditions on every hand were favorable to it, and in the time when scarcely a home was untouched by the loss of some of its members, any accepted foreboding of ill was almost certain to be realized in fact sooner or later. A number of the supplementary statements referred specifically to tragedies of the war.

It was largely for reasons associated with this consideration that no effort was made to get reports from a number of men. It was assumed that everyone would be more or less familiar with the popular soldier superstitions and perhaps affected by

them, but the men themselves, whose army experience was comparatively recent would probably be more seriously affected and as a group they would not be homogeneous, although their reports would be highly interesting.

Among the superstitions mentioned it does not seem that many of them are of the kind that would be associated with a soldier's experience and therefore popularized by him, but on this point it is difficult to estimate. Certainly the people had greater association with each other than in normal times, and by this alone a knowledge of superstitions would be slightly increased. As was suggested above, probably a larger effect was in the confirmation of unlucky signs, which frequent and widespread losses supplied to those who had a tendency to credulity.

The attitude of so-called "Fatalism" adopted by many soldiers, commonly expressed in the encouragement given to recruits that "if a shell carries your number it will get you, and if it doesn't then there's nothing to worry about," perhaps had some effect on the credulity of the people at home. The soldier in a way personified the bearer of his bad luck as there was usually no apparent author; it was something inanimate, over which he had no control, and yet withal it was cognizant of him individually and held control of his destiny. It struck him down or let him live according to no perceptible plan, and his only chance of defense was to guess right when he had an opportunity of arranging his own actions, much like Caliban's Setebos as described by Browning. This attitude may have created in the people an unrealized and unexpressed feeling of some hitherto unknown force or power which similarly operated according to no reasonable plan for their good or evil, and they consequently attempted to get some forewarning by interpreting common events and circumstances. However, for lack of pre-war data any estimate of the effect on superstitiousness must be very unreliable.

Conclusion

It is noteworthy that in this group of educated people in training for teaching, such a large proportion of them gave acceptable evidence of submitting to the effects of superstitions, as Dresslar pointed out in his study. It suggests the question whether a group of students of some other profession would show similar tendencies, and also, what burden of correction, if any, should be laid on preparatory schools. Presumably no encouragement is given to superstitious belief in preparatory schools, but since they are training fundamentally

for life in the world of facts, then it would seem that they have a golden opportunity to impress a realization that events do not happen without adequate cause, and that relationships do not exist on the basis of superstitions but rather on the basis of natural laws.

It is probably in harmony with general opinion that the Scotch should appear to be more superstitious than the Americans although the difference is not very great, except in the number of superstitions that were recalled. About 25% were common in both groups, although the individuals were separated by thousands of miles, indicating the widespread acquaintance with knowledge that is practically unrecorded.

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THE RELATION OF INTELLIGENCE TO ABILITY IN THE "THREE R'S" IN THE CASE OF RETARDED CHILDREN

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The Problem

It is the purpose of this paper to set forth the results of an investigation of the relation between the intelligence of a group of retarded children and their pedagogical ability as measured by standardized educational tests in reading, writing, arithmetic and spelling. The problem is thus an attempt to determine in how far these children are educable in the school subjects. Standard educational measurements have been used to admit of a direct comparison of results with those obtained in the examination of public school children in the regular grades.

Groups Tested [1]

Special class children of the Oakland public schools were examined by means of pedagogical tests in the four fundamentals. There were about 250 children enrolled in these classes, 224 being in attendance at the time, but occasional absences from school on the days when the tests were given makes the number for whom records were secured 210. These children had all been given Stanford-Binet tests, within two years, by the Assistant Director of Research of the Oakland schools or by trained examiners under his supervision. But to insure a more accurate mental age rating these mental ages were all brought up-to-date by using the present chronological age and I Q as the index of the present mental age. This method introduces a factor of error due to the different mental growth rates and the fact that the mental test scale is not an absolute index so that the I Q may vary slightly from one examination to the next. Yet the error is much less than would have been the case if the mental age had not been so calculated.

There are sixteen of these special classes in the Oakland schools and they are distributed in the various parts of the

[1] This investigation was made possible through the courtesy of Dr. V. E. Dickson, Director of Research of the Oakland public schools, to whom the writer is very much indebted for his hearty cooperation and valuable assistance in making available mental test records.

city to meet the most urgent needs for such classes. The enrollment is limited to sixteen and in a number of the schools this enrollment was incomplete. The classes vary much in ability both within the group and in comparison with each other. For instance at the H..... school only three of the fourteen children in the special class could take the tests at all; the median mental age was only six and the median I Q 63; while at the D..... school the median mental age for the special class was ten and the median I Q 72.

Sixteen nationalities are represented in these classes; the proportion of Italian and Portuguese children is in excess of the Americans. Twenty-nine per cent of the special class children are Italian, twenty-five per cent Portuguese and only twenty-two per cent American whereas in the public school population of Oakland only six per cent are of Italian parentage, six per cent Portuguese and fifty-eight per cent American.

The occupational status is indicated by a distribution of the group according to father's occupation into the five non-competing groups of Taussig's classification. This is a rather unsatisfactory grouping in the first place and becomes still less satisfactory for my purpose, when the nature of the data upon which the grouping is based is taken into consideration. For the most part the records give rather inexact information. " Works in the shipyard " may, and probably does, in most of these cases, mean manual labor of the unskilled kind or it may mean a highly specialized task involving more than ordinary skill. So " factory worker " may mean skilled or unskilled labor. And in cases where the children have reported the parents' occupation, they frequently fail to differentiate employee and owner in " works in a grocery store." With these very drastic qualifications the classification may be taken to indicate only very roughly the economic and social distribution of the group. Such data were available for 187 cases.

TAUSSIG'S NON-COMPETING GROUPS		
Professional	1 cases	0.5 per cent
Semi-Professional or higher business	21 "	11.2 " "
Skilled	53 "	28.5 " "
Semi-skilled	54 "	28.8 " "
Unskilled	58 "	31.0 " "

It is at least significant that 88 per cent of the children in the Oakland special classes came from Taussig's " hard-handed groups," indicating, as the results of other investigations have,[2] that the children who make a poor showing in

[2] Terman, Lewis M.: Measurement of Intelligence, pp. 72 and 114. The Intelligence of School Children, p. 188.

intelligence tests are drawn, in large measure, from the less intelligent, inferior social classes. Consequently the special classes are recruited in such large proportion from the lower groups.

In evaluating the results of the investigation, such social factors as those obtaining in particular localities must also be taken into account. In one special class in an Italian district it was found that many of the children were given wine before coming to school. It was the custom in the home to use wine instead of water and quite as freely as tea and coffee are used in many homes. Nor does the prohibition amendment interfere with their home brew! The schools down near the water front drew from the poorer homes. The children were particularly ill-clad and poorly nourished.

The results, on the whole, indicate that a large proportion of the children of the special classes come from parents of a grade of intelligence low enough to keep them in the unskilled or semi-skilled class. This fact is important in the consideration of the kind of education which should be attempted in the special classes.

Woody Arithmetic test results for 126 cases in the special classes of Duluth, Minnesota,[3] are included and the results of the examination [4] of 114 Minnesota special class children in reading, spelling and writing. The reading results for the Minnesota special class group are based on individual tests made with a scale devised by the writer.[5] Starch's spelling test was used and the Ayres writing scale.

Method

The educational tests for the Oakland group were all given by the writer with the exception of a few " follow-up " spelling tests and some of the Woody tests which were given by the teacher after careful oral and written instructions. The tests were given to each special class group as a whole and were followed one after another in the same half day. To avoid fatigue intermissions were given between tests and the nature of the tasks was varied by giving them in such order that a reading test followed a spelling test, an arithmetic test followed a reading test and a writing test followed arithmetic, thus alternating the kind of operation to be performed.

[3] Courtesy of Miss Maude Keater, formerly director of special classes, Duluth.

[4] Courtesy of Dr. F. Kuhlmann, director of research, Minnesota School for Feebleminded.

[5] Merrill, Maud A.: A Scale for the Individual Measurement of Reading Ability. *Jour. of Educ. Psych.,* October, 1919, Vol. X, no. 8.

The problem of examining groups of children of such varied mental capacities presented great practical difficulties, inasmuch as the same class involved mental ages from three to nine, in one instance, and in no case less than four different mental levels. In chronological age they ranged from seven to seventeen! The task, however, was not impossible. The same idea and the spirit of competition elicited their interest at once and the tests extended far enough down in the scale so that most of the children could do something with each test even though they may have made too low a record for the score to be significant. They were encouraged to think they were doing well and made to understand that nobody was expected to get everything done, to avoid undue discouragement with the harder tasks. The younger, more uncritical children were allowed to have all the papers that the rest had and were kept from disturbing the others by being allowed to mark the papers in imitation of the older ones. For the most part, the tests, as group tests, worked very well, much better than I had anticipated.

The tests used were:

Reading,
Haggerty: Achievement in Reading. Sigma 1.[6]
Kansas Silent Reading Test.
Thorndike: Alpha 2
Arithmetic:
Woody: Series B. Four Fundamentals
Cleveland Spiral Test.
Spelling:
Ayres Lists H, J, L, N, P, S. (10 words from each)
Writing:
Ayres: Three slant Edition.

The Thorndike Visual Vocabulary test was tried but discarded after a number of trials because it was unsatisfactory for the group. It was both too long and too difficult. One hundred and five individual reading tests with the Merrill scale[7] were also given.

Conclusions were based on comparison of the test results with standard norms. The results for two groups of normal children who had been Bineted were used for comparison with the special class groups. One of the normal groups consisted

[6] These data were made available through the courtesy of Dr. Stockton, director of the training school, San Jose Normal.

[7] Merrill, Maud A.: A Scale for the Individual Measurement of Reading Ability. *Jour. Educ. Psych.*, X, 8; October, 1919.

of 46 children in the third and fourth grades of one of the Oakland schools. These children were given the same tests that the special class children were given and under the same conditions. The other normal group was made up of 90 children in the fourth and fifth grades of the San Jose Normal Training School. These children constitute, on the whole, a rather superior group. The tests used for this group were the Courtis Arithmetic, Kansas Silent Reading and Ayres Spelling. They were given by Dr. Stockton's assistants at the Normal Training School.

The results of the investigation follow and will be considered with regard to reliability of the ratings, overlapping of pedagogical abilities at the different mental levels and the degree of relationship between mental level and pedagogical ability.

The Distribution of Mental Ages, Chronological Ages and I Q of the Group Studied

Classification

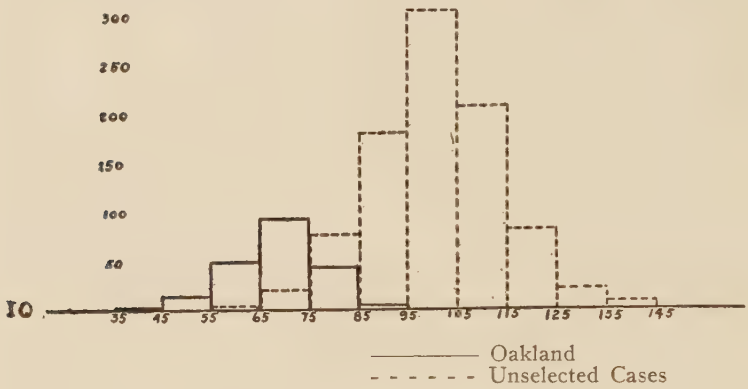
The typical case of the Oakland special class group is the thirteen-year-old with a mental age of eight years and eight months and an I Q of approximately 70, borderline intelligence, a retardation of about five years. The range above and below the median extends from mental age three and a half to thirteen and from chronological age seven and a half to seventeen with a range of I Q's from 40 to 94.

Between I Q 70 and 90 are found 51.4 per cent of the cases. These may be roughly classified as dull. In the group below 70, 44.8 per cent of the cases fall above 50 and 3.8 per cent below 50. Those falling below 70 have been designated feebleminded. However, this classification is merely for convenience and is purely arbitrary. No adequate diagnosis has been attempted and the classification is merely to indicate in terms of ordinary usage how the individuals comprising the groups are distributed.

In a comparison with 1000 unselected cases of Dr. Terman's[8] investigation, it was found that the lower range of the special class group extends below that of the Stanford group, that 45 per cent of the special class group occur between I Q's 65 and 75 while in the Stanford group of unselected cases only 2.3 per cent of the cases are found. The inferiority of the group in comparison with the unselected cases is indicated by the graph.

[8] Terman, Lewis M.: The Measurement of Intelligence, p. 66.

Distribution of I Q's of Oakland
Cases Compared with
1000 Unselected Cases—Stanford Investigation



The distribution of mental ages:

Mental age	Number of cases
3.6— 4.5	2
4.6— 5.5	3
5.6— 6.5	14
6.6— 7.5	33
7.6— 8.5	43
8.6— 9.5	37
9.6—10.5	47
10.6—11.5	19
11.6—12.5	6
12.6—13.5	6

Mental ages have been defined as "six year old" between 5.6, (five years and six months) and 6.5 (six years and five months), "ten year old" between 9.6 and 10.5, etc. This definition is the one customarily used in the classification of cases according to "age-grade." The modes in this group fall at eight and ten. The highest frequency, 22.5 per cent of the cases, is found at year ten, the next highest, 20.5 per cent, at year eight.

The mode in the distribution curve for chronological ages occurs at year fourteen, where 25 per cent of the cases are found. Year fourteen is here defined as including those cases between 13.6 and 14.5 as in the case of the mental ages. We find again that the lower range extends farther than the upper range because of the operation of the compulsory school law which, after the age fourteen and fifteen, tends to remove the only factor that is sufficiently powerful to keep these

people in school. Statistics of elimination show that after the age of compulsory school attendance has been reached economic pressure and incapacity operate to eliminate a large number of pupils from the public schools. Both of these causes are important factors in this group.

Cases have been placed in the special classes as young as seven and a half years. Such measures can serve only to relieve the regular grades as a child sufficiently retarded at seven to be placed in a special class can profit but little by the usual special class training at his level of ability. In a few cases children have remained until sixteen and seventeen.

Distribution by Schools

The distribution of mental ages within each special class group covers so wide a range that the central tendency represents the situation only very crudely. The smallest number of cases in any group examined was ten and in no instance was the full enrollment available for the test. The average number present was thirteen. The classes were small enough so that optimum conditions for group testing were secured. It was possible to control the conditions of the test more perfectly than would have been possible with a larger group. Indeed, the wide range of mental ages made a small group imperative to secure satisfactory results.

The poorest group consisted of children who were quite unable to take the group pedagogical tests at all. Three of the children were selected for group work but all the rest were given individual tests to verify the teacher's judgment of their inability. On the other hand three other groups have each a median mental age of ten. These classes are attempting more regular grade work than some of the others and hand work occupies a conspicuously subordinate place on their program as compared with its prominence at some of the other schools.

Semi-Interquartile Range Comparison

The wide range of abilities, as indicated by mental age and I Q in comparison with chronological age, is shown by the percentile distribution showing interquartile range.

	Chron. Age	Ment. Age	I Q
25 percentile	11.3	7.6	63.3
50 percentile	13.1	8.8	70.3
75 percentile	14.3	10.0	77.3

With a semi-interquartile range of 7.6 to 10.0 for mental age, the group shows a level of ability which, according to our educational classification, should correspond roughly to the first four grades in the elementary school. How nearly they attain that level will appear in considering the relationship between mental level and pedagogical ability.

Special Class a Highly Selected Group

It is apparent in comparing the distributions of mental and chronological levels, that the special class group is already a selected group and does not necessarily represent the lower end of the normal curve of distribution of abilities found among public school children. In the first place only those children are selected for examination for the special class who are reported by the teacher to be pedagogically retarded in the regular grade. It has been abundantly proved that many over-age children escape detection because the teacher compares their work with the work of children in the grade and finds it satisfactory, forgetting that the child should be compared with others of his age. Hence many over-age children escape notice. In the second place a number of children have been particularly selected because of their failure in school adjustments, including school work, who would not, because of their degree of mental retardation alone, have been considered proper subjects for a special class.

The factor of pedagogical retardation has thus been the important factor in selecting the group rather than the degree of mental retardation alone. In any consideration of the relation between mental and pedagogical retardation, it is important that the group be an unbiased sampling representing the lower end of the normal curve. Inasmuch as the present investigation has of necessity been confined to special class groups, it is not necessarily fairly representative of retarded children in general. The conclusions are not intended to be in any way considered as final but the results of the study do indicate some suggestive facts with regard to the lower end of the curve.

Reliability of Ratings

Factors Causing Variability

The reliability of rating obtained by the use of mental and pedagogical tests depends on the reliability of the tests themselves as measures of those abilities and upon the variability of the individuals tested. The reliability of the Stanford Revision of the Binet tests has been established by so many con-

secutive re-examinations that its reliability as an instrument is well known. Reliability coefficients [9] have always been found to be in the neighborhood of .90. It is safe to assume that for any fairly wide-range group, its reliability coefficient would be in the same neighborhood.

Pedagogical tests, however, are as yet very crude instruments. Even the makers of tests disagree not only as to what they test but what they should test. The outstanding difficulties to be overcome in the field of pedagogical testing indicate how crude the instruments are and how manifold are the factors involved in the construction of anything approaching exact measurements of general educational ability by means of the specific abilities which go to make up general educational ability. Though the measurements are crude they are like the scales for mental measurement in that they are, even in the present form, superior to personal judgment.

Reliability coefficients are available for very few of the tests. Kelly found, in the reexamination of " two classes of about 30 ", that the reliability of the Kansas Silent Reading test was only .2 and .3.[10] Starch [11] found that re-examinations of 50 fifth and sixth grade pupils showed correlations of .65 between first and second Kansas Silent Reading tests; .45 between first and second Thorndike vocabulary tests and .78 between first and second Starch tests of reading. For none of these tests are comparable forms available and all reliability coefficients are based on repetition of the same test.

No reliability coefficients have been secured for the group tested for the reason that second comparable forms of the tests given are not available and because the re-examination of the sixteen separate groups was impracticable under the circumstances of the investigation.

The selection of tests to be used for this investigation was made with a view to the peculiar difficulties presented by a group of special class children of such diverse abilities. It was of primary importance to select tests which could be given with the simplest explanations. To make such a group of children understand what you want them to do is a task of no small difficulty and challenges the ingenuity of the examiner! But most important of all was the selection of tests which

[9] By reliability coefficient is here meant the extent to which a test correlates with a second similar test. Cf. Kelley, T. L.: Measurement of Overlapping. *Jr. Educ. Psych.*, X, 9: 1919.

[10] Kelly, F. J.: The Kansas Silent Reading Tests. *Jr. Educ. Psych.*, VII, 2.

[11] Starch, D.: Reliability of Reading Tests. *School and Society*, July, 1918.

would go far enough down in the scale of pedagogical ability to measure the ability of the group. This aspect of the problem was not successfully solved. Fifty per cent of the children were below the level of ability which the scales used will measure—assuming that the tests did measure ability to that point. Owing to the other factors that enter into variability, it may be that this assumption is not entirely justified.

In the first place mental defectives are notoriously variable in the quality of their performances from time to time. Their power of attention is weak and variable. Their store of associated ideas is meagre in comparison with the wealth of associations of normal children and consequently they see fewer possibilities in things. They are easily bored. A group of special class children is usually a group of school failures with the usual psychosis of failure. Often they are disciplinary cases. Most of them are out of what Witmer calls " educational rapport."

Then, too, group tests have all the disadvantages incident to distractions which are inherent under group conditions. These difficulties involved in group measurements were largely obviated by the small groups and by the nature of the tests. It was possible to see that the children did not look at each other's papers, that they were all attending to instructions and that there were as few disturbing noises and movements as possible. The tests selected involved only simple directions and were short and interesting.

Another possible factor of variability which might influence the reliability of the ratings is the fact that in many of the cases there is a discrepancy of two years between the date of the mental examination and the date of the pedagogical examination. As I have indicated, all mental ages were brought up-to-date and while this involves some error, the value of the mental age so computed for comparison with the norms for the pedagogical tests is probably very little affected.

Correlations with Teachers' Estimates

Correlations [12] were made between the grade level attained in the various subjects as indicated by the results of the pedagogical tests and the teachers' estimate of the grade ability in each subject. Teachers were asked to grade each child as to the quality of work which he was doing in the grade in which he was classified. The ratings were made on a scale of five. The correlations between grade ability as indicated

[12] The Pearson Product-moment formula was used in calculating all correlations.

by the tests and the teachers' estimate of grade ability is as follows:

Teacner's estimate and:

Grade ability in reading tests	r = .731	P.E. ± .028
Grade ability in arithmetic tests	r = .868	P.E. ± .013
Grade ability in spelling tests	r = .679	P.E. ± .024
Grade ability in writing tests	r = .677	P.E. ± .027

Teachers' estimate of grade ability in reading, writing, arithmetic and spelling correlated with mental age gives r = .610 ± .030.

That the teachers' estimate of grade and the test results show such high correlation is very surprising. Such correlations are not usually so high. The fact would seem to indicate a degree of reliability of the pedagogical test ratings that we are not justified in assuming and an unusually high degree of accuracy of teachers' ratings. It must be borne in mind in this connection that these teachers all know the mental age and I Q ratings of these children and use them largely in clasification, also that the group with which each teacher works is very small and permits a degree of individual attention which most teachers do not have an opportunity to give. It is never the less rather inexplicable that any such correlation should run as high as 86! The ratings on quality of work done run about as they would be expected to and seem to corroborate the testimony of the correlation coefficients that these particular teachers do not as a whole tend to rate their pupils much too high.

Overlapping of Pedagogical Abilities At Different Mental Levels

Per Cent of Overlapping from One Mental Age to the Next

The measurement of overlapping in this study is the per cent of the cases at any mental age who reach or exceed the median score of the next higher mental age. Thorndike estimates the value of percentile measurements of overlapping as follows: "The great advantage gained by comparing groups by the per cent of one group reaching or exceeding the point on the scale that is reached or exceeded by a given per cent of the other group is that results are mutually comparable whatever the traits may be. . . . Another advantage lies in the fact that this percentile comparison reminds one con-

stantly of the overlapping of the two groups when such exists."[13]

The per cent of overlapping is shown for mental ages six to twelve in reading, arithmetic, spelling and writing.

MENTAL AGE OVERLAPPING OF SCORES IN READING

Mental Age	Haggerty Test 1	Sigma 1 Test 2	Thorndike Alpha 2	Kansas Silent Reading
VI	14%	28%	7%	37%
VII	38%	39%	26%	32%
VIII	31%	30%	25%	33%
IX	6%	31%	50%	20%
X	42%	63%	63%	81%
XI	26%	46%	15%	28%
Aver.	26%	39%	31%	38%
Range	14 to 42	28 to 63	7 to 63	20 to 81

The table reads: In the Haggerty test of achievement in reading Sigma 1 test 1, 14 per cent of the mental six year olds reach or exceed the median score for mental seven year olds.

MENTAL AGE OVERLAPPING OF SCORES IN ARITHMETIC

Mental Age	Woody Scale				Cleveland Scale	
	Add.	Subt.	Mult.	Div.	Coefficient	Combined Score
VI	....	....	....	....	42%	44%
VII	19%	28%	....	....	30%	15%
VIII	24%	11%	19%	30%	29%	12%
IX	40%	31%	43%	34%	37%	32%
X	55%	60%	47%	72%	45%	48%
XI	6%	35%	18%	18%	19%	10%
Aver.	29%	33%	32%	38%	34%	27%

MENTAL AGE OVERLAPPING OF SCORES IN WRITING AND SPELLING

Mental Age	Spelling	Writing		
		Speed	Quality	Combined Score
VI	25%	28%	50%	50%
VII	87%	35%	64%	42%
VIII	35%	21%	21%	19%
IX	60%	40%	55%	30%
X	76%	74%	50%	74%
XI	63%	53%	63%	50%
Aver.	58%	42%	50%	44%

[13] Thorndike, E. L.: Educational Psychology. vol. III, p. 177.

In the discussion of the relative amounts of overlapping revealed by these percentages, it is not contended that these figures represent adequate measurements of overlapping in the abilities measured. The factors that make for overlapping are discussed a little farther on. There are, however, in the particular test conditions under consideration, several things which need to be kept in view in evaluating the significance of the above percentages. In spelling, for instance, the score is expressed in terms of grade attainment, and grade attainment is a very crude measure of ability. The score in Alpha 2 is expressed in terms of decimals and the range is from 0 to 6.5, while in the Cleveland arithmetic test the score ranges from 0 to 200. However, the measurement of overlapping in terms of percentiles does render even such diverse ratings comparable and does indicate very significant facts with regard to the amount of overlapping from one mental age to the next in the traits measured.

There is a significant difference between the percentages of overlapping of scores in the pedagogical tests from one mental age to the next and that found in the overlapping of mental and physical traits. In such measurements there is a gradual increase from the lower to the higher mental ages in percentages of overlapping, while in the scores for these pedagogical tests there is no such constant tendency towards either increase or decrease in the amount of overlapping.

The amount of overlapping from one mental age to the next in reading scores is about 33 per cent. That is, 33 per cent of the children of one mental age reach or exceed the median for the next higher mental age. Starch[14] says of measurements in reading ability, " in speed and comprehension 31.8 per cent of pupils of any grade reach or exceed the median of the next grade above." In regard to the Kansas Silent reading test Dr. F. J. Kelly[15] states that " the reading ability possessed by the median child in any one grade is superior to the ability possessed by at least one-third of the children in the class above him and is no better than at least one-third of the class below him." Of course it does not follow from these data, as Dr. T. L. Kelley[16] has pointed out, that these children are necessarily so badly classified as the authors have been led to conclude from their data. Statistical considerations must be taken into account in evaluating the results.

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[14] Starch, D.: Educational Measurements, 1916, p. 42.

[15] Kelly, F. J.: Kansas Silent Reading Tests. *Jr. Ed. Psych.*, vol. 7, no. 2.

[16] Kelley, T. L.: Measurement of Overlapping. *Jr. Ed. Psych.*, vol. 10, no. 9.

In all of the pedagogical test results there is apparent in the Oakland data, a marked inferiority of the mental eleven year group. In the Kansas Silent reading test, for instance, 81 per cent of the mental ten year olds are superior to the median child in the eleven year group.

In the Thorndike understanding of sentences test, Alpha 2, only 7 per cent of the mental six year old scored at all on the test. Thorndike gives no norms below the fourth grade and the test is ill adapted to this group of children. The scores used in this study are at the lower end of the scale for which Thorndike gives scores but no norms. The percentiles here are based on the comparison between the attainments of mental six year olds with the attainments of mental seven year olds of the same group. Above the age of eight the median scores show no increase from one mental age to the next.

The Haggerty test of achievement in reading is better adapted for this group of children than either of the other reading tests used. The Kansas Silent reading test is characterized by a piling up of zero scores at the lower mental ages while in the Haggerty test there are fewer children who fail to make any score at all in the test. The 14 per cent of the mental six year olds who reach or exceed the median for mental seven year olds represent higher scores than the 37 per cent of the mental six year olds who reach or exceed the median for mental seven year olds in the Kansas test, where so many of the ratings for both six and seven year olds were zero scores.

The tendency for the scores to pile up at the zero end of the distribution is noticeable particularly in the Cleveland Arithmetic test also. This is, of course, accounted for largely by the fact that these tests are not intended for use below the third grade.

It is characteristic of the wide variability of performance that one mental seven year old scores above the standard median for mental ten year olds in the Haggerty reading test. One mental seven year old scores above the standard median for nine year olds and one scores at the median for mental ten year olds in the Kansas test. On the other hand, nine of the mental eleven year olds fall below the median for mental nine year olds in the same test, while in the Woody arithmetic tests two mental ten year olds make zero scores.

The range covered by the scores of mental eight and nine year olds in the Haggerty test is about the same except that two cases in the eight year group exceed any in the nine year group. The Woody arithmetic scores, while starting with

zero scores at each mental age up to eleven extend just a little farther at each higher mental age.

Spelling and writing abilities overlap to a greater extent than any of the pedagogical abilities tested. This is probably due to the fact that the acquisition of writing and spelling ability is not so closely dependent upon mental development as is ability in reading and arithmetic.

Grade Overlapping and the Overlapping of Mental Ages

Evidences of the high percentages of overlapping from one grade to the next have appeared in a number of studies. The investigations of Starch, Kelly and Courtis in the school subjects show overlapping of grades of from 20 to 40 per cent. Courtis[17] concludes, " the amount of overlapping of the grades is constant, and is, therefore, due to the one factor that is common to all the schools and grades—that is, to the inherent differences in children in their ability to respond to training . . ." Kruse's [18] study of overlapping bears out these data in the generally high percentages of overlapping among the upper elementary school grades when measured in terms of attainments in single tests. The average amount of overlapping in the various tests amounted to about 30 per cent.

The results of this study indicate that there is practically the same amount of overlapping from one mental age to the next as there is in the case of school children from one grade to the next. About a third of the children of one mental age reach or exceed the median for the next higher mental age.

Causes of Overlapping

In discussing the causes of overlapping in school grades T. L. Kelley[19] considers that there are three factors that make for overlapping (1) unreliability of tests, (2) unimportance of the function tested and (3) failure to properly classify; and that the last should not be assumed to be the cause until the other two are known and taken account of. The first two probably account, in part, for the amount of overlapping revealed in the present study. By unimportance of the function tested, I mean that a growing function is a better means of differentiating between two mental levels than one in which the degree of improvement is relatively slight. For instance, spelling will differentiate better between third and fourth grade

[17] Courtis, E. A.: The Courtis Tests in Arithmetic. New York School of Inquiry, vol. I, p. 450.

[18] Kruse, Paul J.: The Overlapping of Attainments in Certain Sixth, Seventh, and Eighth Grades. Teachers College Contribution, No. 92.

[19] *Op. cit.*

levels of ability in that function than between eleventh and twelfth grade where there is little growth of the function. In the case of these retarded children where the median chronological age for the group is thirteen, it is very probable that there is comparatively little growth of these functions from one mental level to the next.

The causes of overlapping in the present study seem to be, then, (1) the unreliability of the tests, (2) the variability of mental defectives, (3) the unimportance of the functions tested for the differentiation of abilities, (4) and that additional factor which Courtis calls " inherent differences in children in their ability to respond to training," also (5) the error resulting from bringing the mental age up-to-date, and (6) the fact that the Binet tests were not all given by the same person.

Degree of Relationship Between Mental Level and Pedagogical Ability

Median Increase from One Mental Level to the Next.

A comparison of the central tendencies of the group studied with the standards for public school children in the same tests indicates a definite increase in pedagogical ability from one mental age to the next. In almost every instance, how-

Comparison of Mental Level with Pedagogical Ability on the Basis of Median Scores

		Reading			
Grade	Mental Age	Haggerty Test 1	Sigma 1 Test 2	Kansas Test	Thorndike Alpha 2
Norms	6	....	....	....	...
.....	5.6– 6.5	2.0	....	0	0
Norms	7	4.0	2.0	....	...
I	6.6– 7.5	6.5	1.0	0	0
Norms	8	12.0	8.0	....	...
II	7.6– 8.5	8.5	5.0	1.4	2.2
Norms	9	16.0	14.0	5.3	...
III	8.6– 9.5	11.0	10.0	3.8	4.5
Norms	10	20.0	18.0	9.5	5.25
IV	9.6–10.5	17.0	14.0	8.3	4.5
Norms	11	....	24.0	13.2	5.75
V	10.6–11.5	18.0	13.0	2.7	4.5
Norms	12	....	....	13.9	6.5
VI	11.6–12.5	21.0	15.5	8.7	5.2

Arithmetic

Grade	Mental Age	Woody					Cleveland
		Add.	Subt.	Mult.	Div.	Index	Combined Score
Norms	7	....	....	....	....	....	.....
I	6.6– 7.5	3.0	....	....	....	1.6	6.5
Norms	8	4.5	3.0	....	....	3.7	.....
II	7.6– 8.5	5.0	2.0	0	....	3.3	16.2
Norms	9	9.0	6.0	3.5	3.0	5.3	70.7
III	8.6– 9.5	7.0	5.5	4.0	2.0	4.2	40.0
Norms	10	11.0	8.0	7.0	5.0	7.7	114.8
IV	9.6–10.5	9.0	8.0	5.0	4.0	6.8	57.3
Norms	11	14.0	10.0	11.0	7.0	10.5	165.9
V	10.6–11.5	9.0	7.0	6.0	3.0	6.7	66.5
Norms	12	16.0	12.0	15.0	10.0	13.2	199.6
VI	11.6–12.5	14.0	9.0	10.0	6.0	9.2	130.5

ever, this ability is below that of the median normal child ot the same mental age as judged by grade standards. (That is assuming that the standard for grade I is normal for seven year olds, grade II for eight year olds, etc.) An exception occurs in the Haggerty test for achievement in reading where, in comparison with the grade standard, mental seven year olds are above the first grade median. In comparison with Haggerty's age norms for seven year olds they are about the same, though the Oakland median is still higher by .5. The second grade median equals the standard median and the third and forth grade medians exceed the standard.

Spelling and Writing

Grade	Norm I	Norm II		Norm III		Norm IV		Norm V		Norm VI	
Writing	22	27	27	33	38	37	46	43	36	53	36
Spelling	..	II	–II	III	III	IV	III	V	III	VI	III

The table shows a comparison of mental level with pedagogical ability on the basis of median scores. Comparisons are made on the assumption that mental seven year olds should attain first grade standards, mental eight year olds second grade standards, etc. Standard norms are given and under them medians for the Oakland group. For instance, there are no standards given for mental six year olds and the only two tests in which the Oakland median mental six year olds made

any score were test 1 Sigma 1 in reading and the Cleveland arithmetic test. Median in the Kansas and Thorndike reading tests was 0. Second grade standards are given for Sigma 1, Woody Arithmetic, writing and spelling. No standards are given below third grade for the Kansas Silent Reading test and the Cleveland arithmetic test, and for Thorndike Alpha 2 there are no norms below fourth grade. The scores on Alpha 2 show no increase for mental ages nine, ten and eleven.

The Haggerty test of reading reaches the lower levels of ability more successfully than the other reading tests. It is more serviceable for the present purpose for that reason as there are norms available for both age and grade comparisons. The increase from one mental age to the next is fairly constant with the exception of the eleven year group. In test 2 the median for this group is inferior to that for the ten year old group. There is imperfect agreement between the age norms and the grade standards that Haggerty [20] gives. This is probably due to the presence of six year olds in the first grades upon which the norms were based. Beyond first grade the grade standards are higher than the age standards. Slight discrepancies would be expected between the two standards because of the variations in ability found in any grade.

The Kansas Silent Reading test shows a close correspondence between third and fourth grade but again the mental eleven year group proves to be inferior; this time the median falls below third grade standard, when it should compare with the fifth grade standard. The mental twelve year old group is but little better, the median falling below fourth grade standard.

Only three comparisons are possible with the Thorndike norms. Fourth, fifth and sixth grade standards are above the medians of the Oakland group.

The Woody Arithmetic series proved to be better adapted to the special class group than the Cleveland series. In the first place Woody's tentative norms give standards for the second grade rendering them thus more suitable to express the lower grades of ability found in the group. To express the scores for the four fundamentals in a single score, an index coefficient has been computed by finding the arithmetic mean of the scores on the tests for the four fundamentals. The fact that the Woody test series B is practically a " work limit " test is an added reason for its adaptability to the special class

[20] " These standards are based on the results of the testing of 6,000 children in Richmond, Norfolk, Cincinnati, St. Louis, Minneapolis, Madison and Bloomington." Haggerty, M. E.: Manual of Directions for Reading Sigma 1, World Book Company, 1920.

group. Each child could do all that he was capable of doing in the ten minutes that was allowed for each operation. The index coefficients for these tests show a wider divergence of abilities at the upper mental levels than at the lower. The Oakland medians fall farther below the standard at the higher levels. In addition and multiplication the mental eight year olds are above the standard median, while in subtraction at the ten year level the Oakland median is the same as the norm. In all four fundamentals the mental eleven year group shows the same inferiority as in previous records.

The Cleveland arithmetic results are shown in a combined score. The spiral arrangement of the tests alternates addition, subtraction, multiplication and division increasing each operation in difficulty as it is repeated in the next higher series. The combined score was made by weighting the individual scores for each set. The scale of weights was worked out by Counts [21] in his study of the psychology of arithmetic. The unit used was the average time required to work one example in set A. The scale of weights was as follows:

Set									
A	B	C	D	E	F	G	H	I	J
1.0	1.12	1.45	1.27	3.61	2.73	4.31	3.36	6.14	4.73
K	L	M	N	O					
2.53	6.58	5.35	12.0	5.56					

Averages of the median scores for Cleveland and Grand Rapids were used for standard norms.

Median scores for writing consist of a combined score based on speed and quality. Starch [22] has worked out a scale for equating the speed and quality scores into a single figure. He assumes that the " growth in speed of writing from the first grade to the eighth is equal to the parallel growth in quality." The scores are equated on the principle of a slide rule on which the speed may be read in terms of quality and vice versa. Medians for mental ages nine and ten are above the norm while the median eleven year group goes below the norm for the ten year group. When speed and quality of writing are considered separately a very interesting tendency is apparent. Speed of writing is above the standard median for every mental age except twelve, while quality is uniformly below except the median for mental seven year olds.

[21] Counts, G. S.: Studies in the Psychology of Arithmetic. Supplement. Ed. Mono., 1, 1917.

[22] Starch, D.: Educational Measurements, 1916, p. 84.

The exigencies of the situation made it necessary to make the spelling tests as short as possible to avoid undue fatigue. At the same time it was necessary to arrange the word lists to test a wide range of ability. Accordingly ten words were chosen from list H of the Ayres scale to reach second grade ability and ten words from list L to reach the sixth grade level. When any child made a perfect score on L or a perfect score on H and a zero score on L, he was given an additional test in words from lists J and N and in some cases it was even necessary to use words from lists P and S in order to find a list of words that would measure his ability. These follow up tests and the original plan of using two lists with separate standards for each made it impossible to express the scores in percentile terms. Hence it has been necessary to indicate only grades attained in spelling. The median for each mental age above eight is third grade.

Semi-interquartile Range Comparison

The wide range of ability in the group tested is further apparent when the distribution by interquartile range is considered. The central tendency indicates the position of the dis-

DISTRIBUTION OF PEDAGOGICAL TEST SCORES BY PERCENTILES

Mental Age	Percentile	Kansas Silent Reading	Haggerty Sigma 1	Thorndike Alpha 2	Woody Index Coefficient	Cleveland Arithmetic	Ayres Spelling	Ayres Writing		
			Test 1	Test 2				Speed	Quality	Score
7	25	0	2.5	0	0	0	.5	0	0	0	0
	50	0	6.5	1.0	0	1.6	6.5	0	28	22	22
	75	2.0	11.5	8.5	3.3	3.7	13.5	3	52	30	31
8	25	0	4.0	2.0	0	2.2	5.2	0	0	0	0
	50	1.4	8.5	5.0	2.2	3.3	16.2	0	42	20	27
	75	4.1	12.0	10.0	4.1	4.5	30.6	3	58	27	37
9	25	0	8.0	6.0	2.9	3.0	12.5	2	28	20	20
	50	3.8	11.0	10.0	4.5	4.2	40.0	3	63	28	38
	75	7.1	13.0	14.0	4.9	7.2	74.2	4	83	37	43
10	25	3.6	13.0	10.0	4.1	4.7	48.6	2	62	23	35
	50	8.3	17.0	14.0	4.5	6.2	57.3	3	72	27	42
	75	12.5	19.0	17.0	5.1	8.5	84.6	5	92	37	45
11	25	1.2	9.0	9.0	2.2	3.7	34.5	2	48	20	32
	50	2.7	18.0	13.0	4.5	6.7	66.5	3	64	30	36
	75	9.1	22.0	18.0	5.0	7.5	101.9	5	83	35	47

tribution while the quartile deviation or semi-interquartile range indicates the form of the distribution. The range between the first and third quartile in showing where the middle half of the cases falls, gives a more adequate idea of the variability of the group.

The table shows the 25th percentile or first quartile, the 50th percentile or median and the 75th percentile or third quartile.

Correlation Coefficients Showing Relationship between Mental Level and Pedagogical Ability.

To determine the degree of causal relationship between mental ability and pedagogical ability, correlation coefficients have been computed between mental age and score in the tests. These coefficients throw some light on the degree of achievement of the special class group in reading, arithmetic, spelling and writing when measured in terms of correspondence with mental ability as expressed by mental age. The degree of the relationship is expressed by the following coefficients. In each instance the group comprised at least 159 cases. From 159 cases the groups range in size to 204 cases.

Mental age correlated with:	
Haggerty Achievement in Reading Sigma 1	
Test 1	r = .618 P.E. ±.035
Test 2	r = .338 P.E. ±.050
Kansas Silent Reading	r = .542 P.E. ±.035
Thorndike Alpha 2	r = .486 P.E. ±.035
Merrill Reading Test	r = .498 P.E. ±.050
Average for Reading	r = .496
Woody Arithmetic	
Index Coefficient	r = .569 P.E. ±.041
Addition	r = .628 P.E. ±.035
Subtraction	r = .573 P.E. ±.041
Multiplication	r = .544 P.E. ±.041
Division	r = .511 P.E. ±.041
Cleveland Arithmetic	r = .546 P.E. ±.035
Average for Arithmetic	r = .562
Ayres Writing	
Combined Score	r = .511 P.E. ±.035
Speed	r = .534 P.E. ±.035
Quality	r = .326 P.E. ±.043
Average for Writing	r = .457
Ayres Spelling	r = .473 P.E. ±.035

It is interesting to note that the correlation coefficient between quality of writing and chronological age is higher than between quality and mental age. In the former instance $r = .405$ while in the latter $r = .326$. This would seem to indicate that quality of writing depended more on physical than on mental maturity.

Correlation coefficients have been computed for a group of 126 special class cases in the Duluth (Minnesota) public schools. Woody Arithmetic tests were given to all children in the special classes by Miss Maude Keater, supervisor of special classes. When mental age was correlated with score on the tests (index coefficient) the coefficient of correlation was found to be .687 P.E. $\pm$ .034. In the case of 303 special class children in the Minnesota schools and a group of Oakland special class cases who failed in the group reading tests and were given an individual reading test, a correlation of .524 P.E. $\pm$ .029 was found between mental age and the score on the Merrill test.

Dr. Kuhlmann gave pedagogical tests to 114 special class children in Minnesota in connection with their mental examination. I have correlated mental age with grade in reading (Merrill Scale), mental age with grade in spelling (Starch), and mental age with grade in writing (Ayres).

Writing	r = .576	P.E. ± .043
Spelling	r = .693	P.E. ± .039
Reading	r = .617	P.E. ± .043

A comparison was made with a group of normal children in the third and fourth grades of one of the Oakland schools. These children had been Bineted, and were given the same spelling, writing and reading tests that the special class children were given. The group included only 46 cases, however, the range was relatively narrow, covering as it did, only two grades.

Correlations with mental age show:

Spelling	r = .142	P.E. ± .094
Writing (combined score)	r = .195	P.E. ± .091
Thorndike Alpha 2	r = .168	P.E. ± .102
Kansas Silent Reading	r = .388	P.E. ± .080
Haggerty Sigma 1, Test 1	r = .460	P.E. ± .080

The small number of cases and the very large probable error indicate rather low reliability of these data for purposes of comparison.

Through the courtesy of Dr. Stockton and Miss Davis of the San Jose Normal, data have been secured for the children of the fourth and fifth grades in the training school. Mental ages and scores on the Monroe reading tests, Courtis arithmetic tests and Ayres spelling tests were secured for 90 cases. These offer a more reliable basis of comparison. I have computed correlation coefficients between mental age and scores on each of these tests.

Mental age and:

Monroe reading test	r = .452	P.E. ± .058
Courtis arithmetic	r = .482	P.E. ± .052
Ayres spelling	r = .268	P.E. ± .061

There is a close correspondence between the coefficients that have been computed for the special class groups and those for normal children in the Redwood City (California) schools found by Mr. Howard.[23] Between mental age and reading ability he found a median correlation of .51; between mental age and arithmetic .40; between mental age and spelling .49.

Correlations were also made between I Q and scores on the Haggerty, Kansas and Woody tests for the 46 mental ten year olds in the Oakland special class group.

I Q correlated with:

Kansas silent reading	r = —.008
Haggerty Sigma 1, test 1	r = —.037
Woody arithmetic	r = —.218

A very small negative correlation in each instance substantiates the conclusion that, with respect to pedagogical ability, the mental age concept stands for a more or less definite level of ability regardless of life age. This fact is very significant in dealing with children. Mental age stands for a definite level of ability.

The correlations indicate that there is a definite relationship between mental level and pedagogical ability. A correlation of .50 between mental traits is an indication of a fairly high degree of relationship.

Grade Attainments of the Group Studied.

The results of the study show a marked discrepancy at all levels between theoretical expectancy and actual attainment in the " three R's " as measured by educational tests. Fifty

[23] Howard, Lowery S.: A Mental and Pedagogical Survey of the Redwood City School System. Masters Thesis, Stanford University, 1919.

per cent of the children in the Oakland special classes attain less than second grade standing in reading and arithmetic and fifty per cent attain less than third grade standing in spelling and writing.

In the Kansas Silent Reading test:

70.6 per cent (144 cases) fall below Grade III.
95.6 per cent (195 cases) fall below Grade V.

In the Haggerty Test of Achievement in Reading:

72.3 per cent (115 cases) fall below Grade III.

In the Thorndike test Apha 2 in reading:

82.0 per cent (151 cases) fall below Grade IV.

In Woody Arithmetic tests:

51.7 per cent (77 cases) fall below Grade III.
93.3 per cent (139 cases) fall below Grade V.

In Cleveland Arithmetic tests:

76.7 per cent (138 cases) fall below Grade III.
96.1 per cent (173 cases) fall below Grade V.

In Writing tests:

51.6 per cent (98 cases) fall below Grade III.
83.7 per cent (159 cases) fall below Grade V.

In Spelling tests:

49.8 per cent (96 cases) fall below Grade III.
87.2 per cent (170 cases) fall below Grade V.

Conclusions

1. The results of the study agree with other investigations in that the majority of children in the special classes were found to be pedagogically below their mental level and very widely variable.

2. There is an increase in pedagogical ability from one mental age to the next.

3. There is wide variability of attainments on the same mental level.

4. The overlapping of ability from one mental level to the next corresponds in large measure to the overlapping that is found in the case of normal children from one grade to the next.

5. Owing probably to the fact that many of the mental eleven-year-olds with an I Q of less than 90 escape detection when not conspicuously poor in the " three R's," the group of mental eleven-year-olds in the special classes is made up of children with special disability in school subjects and consequently in comparison falls conspicuously below the level of attainment of the other groups.

6. Special class children with a mental age of six are not profiting to any appreciable extent by instruction in the " three R's."

7. A large per cent of our special class children are not profiting by instruction given in the " three R's."

8. The special class group is not an unbiased sampling of mentally retarded children in the public schools. The children are a selected group in the first place on the basis of retardation in the school subjects.

9. The educational tests in use at present are ill adapted to the testing of subnormal children because they do not measure adequately at the lower end of the scale.

10. The positive correlations between mental level and pedagogical ability indicate a causal connection between general educational abilities and level of intelligence.

11. Considering the sources of error in mental test data, the results seem to indicate that mental age probably correlates about as closely with pedagogical achievement in the case of retarded children in the special classes as in the case of normals.

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THE DANGEROUS AGE

By G. Stanley Hall

The easiest division of every whole is into two halves. Thus day and night are bisected by noon and midnight, the year by both the solstice and the equinox; the racer turns in the middle of his course; curricula, apprenticeships, and long tasks have, from immemorial time, celebrated the completion of their first moiety; and half-way houses divide established courses of travel. So, too, we speak of middle age and think vaguely of it as half-way between birth and death or between adolescence and senescence. If we think of life as a binomial curve rising from a base line at birth and sinking into it at death, midway is the highest point with the longest ordinate, and as the crest of a wave has its spindrift, so life at this point often foams, or at the best shows emulsive tendencies. We come in sight of the descent while the ascent behind is still visible. The man of thirty-five hopes to live the "allotted" span of seventy, and at forty he knows that in another two-score years his work will cease; and thus some comparison of the past and future is inevitable. Some begin taking stock of what has been and what remains to be done, reckoning only from the date of entering upon their careers and trying thus to judge its future by its past. Thus sooner or later there comes to all a realization that the tide that "drew us from out the boundless deep" begins to "turn again home."

These meridianal perturbations usually come earlier in women than in men, and this has been called their "dangerous age."* Both sexes recognize that they face the bankruptcy of some of their youthful hopes, and certain temperaments make a desperate, now-or-never effort to realize their extravagant expectations and are thus led to excesses of many kinds; while others capitulate to fate, lose heart, and perhaps even lose the will to live. Osler was the evil genius, the croaking Poe raven of this period. If such pronouncements as his stimulate talent, which is longer lived, they depress genius, which thrives earlier.

* K. Michaëlis: *The Dangerous Age*. N. Y., 1912.

On the height of life we ought to pause, circumspect, turn from the dead reckonings of the start, and ascend as into an outlook tower to see, before it is too late, if we need to reorient our course by the eternal stars. Here we begin the home stretch toward the finish. Change, or at least thoughts of change, arise, even in those most successful—as biography so abundantly shows—while even partial failure impels many to seek new environments and perhaps callings, and some are driven to mad new ventures. Most, however, despite a certain perturbation, go on perhaps a score of years, and instead of anticipating old age wait till it is upon them and they have to restrict their activities or retire; then only do they accept the burden of years. The modifications in the *vita sexualis* which middle life brings are only now beginning to be understood in their true significance. Its first flush has come and gone, and some settle to the tranquil fruition of a happy married life while others stray into secret and forbidden ways or yield to the excitements of overindulgence just when Nature begins to suggest moderation, so that love grows gross just when its sublimation should begin to be most active. One close and experienced observer points out that the forties is the decade of the triangle, of the paramour, and of divorces for man, and that the preceding decade is so for women; but of course we have no confirmatory statistics for such a conclusion save only for divorce.

The following epitomes, which might be indefinitely multiplied, must suffice here for illustrations of this theme.

The sensational press has so perverted the statements made by Dr. William Osler in his farewell address on leaving the Johns Hopkins University in 1905, and his remarks are so pithy, although semi-humorous, that it seems worth while to quote his words, as follows:[1]

"I have two fixed ideas well known to my friends, harmless obsessions with which I sometimes bore them, but which have a direct bearing on this important problem. The first is the comparative uselessness of men above forty years of age. This may seem shocking, and yet, read aright, the world's history bears out the statement. Take the sum of human achievement in action, in science, in art, in literature—subtract the work of the men above forty, and, while we should miss great treasures, even priceless treasures, we should practically be where we are today. It is difficult to name a great and far-reaching conquest of the mind which has not been given to the world by a man on whose back the sun was still

[1] *Sci. Am.*, March 25, 1905.

shining. The effective, moving, vitalizing work of the world is done between the ages of twenty-five and forty years—these fifteen golden years of plenty, the anabolic or constructive period, in which there is always a balance in the mental bank and the credit is still good.

"In the science and art of medicine there has not been an advance of the first rank which has not been initiated by young or comparatively young men. Vesalius, Harvey, Hunter, Bichat, Laennec, Virchow, Lister, Koch—the green years were yet on their heads when their epoch-making studies were made. To modify an old saying, a man is sane morally at thirty, rich mentally at forty, wise spiritually at fifty—or never. The young men should be encouraged and afforded every possible chance to show what is in them. If there is one thing more than another upon which the professors of the university are to be congratulated, it is this very sympathy and fellowship with their junior associates, upon whom really in many departments, in mine certainly, has fallen the brunt of the work. And herein lies the chief value of the teacher who has passed his climacteric and is no longer a productive factor; he can play the man midwife, as Socrates did to Theaetetus, and determine whether the thoughts which the young men are bringing to the light are false idols or true and noble births.

"My second fixed idea is the uselessness of men above sixty years of age, and the incalculable benefit it would be in commercial, political, and in professional life if, as a matter of course, men stopped work at this age. Donne tells us in his "Biathanatos" that by the laws of certain wise states sexagenarii were precipitated from a bridge, and in Rome men of that age were not admitted to the suffrage, and were called *depontani* because the way to the senate was *per pontem* and they from age were not permitted to come hither. In that charming novel, the "Fixed Period," Anthony Trollope discusses the practical advantages in modern life of a return to this ancient usage, and the plot hinges on the admirable scheme of a college in which at sixty men retired for a year of contemplation before a peaceful departure by chloroform. That incalculable benefits might follow such a scheme is apparent to any one who, like myself, is nearing the limit, and who has made a careful study of the calamities which may befall men during the seventh and eighth decades!

"Still more when he contemplates the many evils which they perpetuate unconsciously and with impunity! As it can be maintained that all the great advances have come from

men under forty, so the history of the world shows that a very large proportion of the evils may be traced to the sexagenarians—nearly all the great mistakes politically and socially, all of the worst poems, most of the bad pictures, a majority of the bad novels, and not a few of the bad sermons and speeches. It is not to be denied that occasionally there is a sexagenarian whose mind, as Cicero remarks, stands out of reach of the body's decay. Such a one has learned the secret of Hermippus, that ancient Roman, who, feeling that the silver cord was loosening, cut himself clear from all companions of his own age, and betook himself to the company of young men, mingling with their games and studies, and so lived to the age of 153, *puerorum halitu refocillatus et educatus.* And there is truth in the story, since it is only those who live with the young who maintain a fresh outlook on the new problems of the world.

"The teacher's life should have three periods—study until twenty-five, investigation until forty, professional until sixty, at which age I would have him retired on a double allowance. Whether Anthony Trollope's suggestion of a college and chloroform should be carried out or not, I have become a little dubious, as my own time is getting so short."

E. G. Dexter[2] disputes Osler's conclusions by referring to such well-known cases as Gladstone, Bismarck, Moltke, Rockefeller, Morgan, etc., and finds that according to the last census there are 4,871,861 persons over sixty in the United States. He recognizes the fact, however, that many corporations refuse to add new men to their working force who are over forty years of age. Dexter had previously tabulated the age of the nearly 9,000 persons mentioned in the 1900 edition of "Who's Who?" and found that comparatively few attained the distinction of being included in this list who were under forty. Of 6,983 men the median age was 46, only one in six being below 40; that is, some 16% were within Osler's period of most effective work. But he concludes that in "Who's Who" older men did not receive the recognition given to their younger confreres. This ratio he finds to be as follows:

20-29	30-39	40-49	50-59	60-69
3.9%	39.5%	36.4%	17.6%	2.4%

Thus the decade from 30 to 39 shows only very slightly greater productivity than the next one, and less than one-half made good, so far as public recognition is concerned, before the age of forty. This is irrespective of vocation.

[2] "Age and Eminence." *Pop. Sci. Mo.*, 66:538 (1904).

From all the studies of genius[3] it would seem that musicians do their best work earliest and that prodigies are most common in this field. In those callings that require a long preparation, science promises earliest recognition because this line of work is entered with better intellectual equipment. Here, too, belong professors, librarians, and teachers. Next come actors and authors, in whom ability is partly born and partly made. Compared with science, inventive genius gains a foothold on the ladder of fame late in life. The business man and financier, the lawyer, doctor, and minister, must often enter their profession from the bottom, and no great inventor is below forty. For women, however, recognition comes earlier, and attractiveness of person has a greater premium here than with her brother; but having outlived her youth, progress is harder.

W. A. Newman Dorland[4] studied the histories of four hundred great men of modern times and concluded that they refute Osler's theory, the large majority of them being still active at sixty, although he distinguishes between workers and thinkers.

E. S. P. Haynes[5] resents the idea sometimes expressed that people should retire from public affairs at forty, although he recognizes that near this age, in both men and women, there is often an impatience with a future which promises to be just like the past, and that there is a peculiar liability to amorous, financial, or other adventures. If people do anything, they are labeled and so get into grooves, and their friends, if they break out in new lines (as, e.g., Ruskin did), are shocked. But the groove is liable to grow narrow; and when this is realized, abrupt changes may occur. Nature protests against decay, and hence it is that we often see the spectacle of impatient old people who are in a hurry, due perhaps to a subconscious effort to feel young again. This is akin to the "dangerous age" in women. Life is not a bed of roses for those who have succeeded, for it is sometimes as difficult to retain as it is to achieve success. Very often our ideas, when we are young, are ahead of our age, but may catch up with us in middle or later life. Very often, too, by ostentatiously turning their backs upon some new movement, the old thereby compel the young to take it up in order to deploy themselves.

In this connection one may reflect, with Louise Creighton, that as older people caused the war, while the younger fought

[3] See *Pop. Sci. Mo.*, July, 1902.
[4] *The Age of Mental Virility.* The Century Co., 1908.
[5] "The Age Limit." *Living Age*, 1914, p. 214.

it, when the latter come home places will have to be found for them, involving a great deal of displacement, so that the tension between old and young has been greatly increased since the close of the war. We also recall the view of George A. Sims,[6] that the effect of the war upon the old was depressing because they felt they must die when the world was in darkness and without realizing the prayer of Simeon. The young, on the other hand, anticipated the harvests of peace, whereas for the old, the prospect of dying before this harvest was garnered was often pathetic.

Charles W. St. John[7] resumes the experimental studies of Ranschburg and Balint, which show that all activities of judgment, association, etc., are retarded, errors increased, and ideas impoverished, in old age. De Fursac tabs the traits of normal senile dementia as (1) impaired attention and association, (2) inaccurate perception of the external world, with illusions and disorientation, (3) disordered memory, retrograde amnesia, and perhaps pseudo-reminiscence, (4) impoverishment of ideas, (5) loss of judgment, (6) loss of affectivity, along with morbid irritability, (7) automatism. There may be ideas of persecution or delusions of greatness. Youthful items of experience hitherto only in the fringe of consciousness now press to the center, and youthful contents are revived. There is a tendency to depart from inductive procedure toward *a priori* methods, where feelings and beliefs are criteria, and especially, as Fechner showed, a tendency to introversion. There is less control, and regression first shows itself in the intellect, which is last to develop.

St. John proceeds to characterize four eminent men who underwent more or less radical transformations in the early stages or youth of old age as follows. Tolstoi[8] was a typical convert. He witnessed the horror of his grandmother's death, which profoundly affected all his later views. When he was about twelve a schoolmate told him that there was no God and that all thought about Him was an invention. Tolstoi accepted this news and went on in a few years to Nihilism. In later life he realized that if he became "more famous than Gogol, Pushkin, Shakespeare, and Molière, what then?" and he could not answer. The ground crumbled under him. There was no reason to live. Every day was bringing him

[6] "The Old Folks and the War." *Living Age*, 1918.

[7] *The Psychology of Senescence.* Master's Thesis, Clark University, Worcester, Mass., 1912.

[8] P. Birukoff: *Leo Tolstoy, his life and work.* Lond., 1906. A Maude: *The Life of Tolstoy.* Lond., 1908.

nearer to the precipice and yet he could not stop. He felt he could live no longer, and the idea of suicide as a last resort was always with him and he had to practice self-deception to escape it. Yet he had a pagan love of life. He found his status summed up in an eastern fable of a traveler who is attacked by a wild beast and attempts to escape by letting himself down into a dried-up well, at the bottom of which he finds a dragon, and so is forced to cling to a wild plant which grows on the wall. Suddenly he sees two mice (one black and one white—day and night) nibbling at the plant from which he hangs, and in despair he looks about, still with a faint hope of escape. On the leaves of this wild plant he sees a few drops of honey, and even with fear at his heart he stretches out his tongue and licks them. Thus the dragon of death inevitably awaits him, while even the honey which he tries to taste does not make him rejoice, for it is no longer sweet. "I cannot turn my eyes from the mice or the dragon. Both are no fable."

Thus the fear of death, which had long haunted him, now excluded everything else and he was in despair. He turned to the working people, whom he had always liked, to study them, and found that although they anticipated death they did not worry about it but had a simple faith that bridges the gulf between the finite and the infinite, although they held much he could not accept. Thus for a year, while he was considering whether or not to kill himself, he was haunted by a feeling he describes as searching after God, not with his reason but with his feelings. Kant and Schopenhauer said they could not know Him. Tolstoi first feared that these experiences presaged his own mental decline. He had joined the church and clung to orthodoxy for three years, but in the end left and was later excommunicated. He became a peasant and finally left his pleasant home for a monastery; as the church had failed, he turned to the Gospels, the core of which he found in the Sermon on the Mount. Here was the solution of his problem. If everyone strives for self there is no happiness. Nor is there any love of family and friends alone, but love must extend to all mankind and even to being, and this must be all-embracing. No doubt of immortality can come to any man who renounces his individual happiness. Instead of God he now worships the world-soul and attains the goal of perfection he once sought in self-development.

Fechner,[9] born in 1801, made professor of physics in 1833, turned to more psychological studies in 1838. He had visual troubles and could not work without bandaging his eyes, lived in a blue room, had insomnia, and seemed about to die. But in 1843 he improved and felt he was called by God to do extraordinary things, prepared for by suffering. The old was gone, and his philosophical inclinations now came into the foreground. He was on the way to the secret of the universe. He believed in sight rather than induction. But this was in the decades when German philosophy was at its lowest ebb, so that his works fell dead. Not only Buchner and Moleschott but Kant belonged to what he called the "night side," for the latter's *Ding-an-Sich* was a plot to banish joy. Fechner knew no epistemology and thought we could come into direct contact with reality itself. Man lives three times, once before birth and in sleep, second alternating, and finally, in death, comes to the eternal awakening. The spirit will then communicate with others without language, and all the dead live in us as Christ did in His followers. The earth will return its soul to the sun. Visible phantoms may be degenerate souls. In his Zend-Avesta (Living Word) he gives us a philosophy which he deems Christian and which really sums up his final view of things. The childish view is nearest right, and the philosopher only reverts to it. Fechner died November 18, 1887, at the age of eighty-six, and after his crisis was really more poet than scientist.

August Comte,[10] born 1798, married at the age of twenty-seven, was divorced at forty-four. He experienced losses by the failure of his publisher, and had his first crisis when he was forty. He met Clotilde DeVaux when he was forty-seven, but she died in one year. He then became the high-priest of humanity, developing his *Politique Positive* and a new religion. His father, a government official, had given him an excellent scientific education, but during his early years his emotional life was entirely undeveloped, and this now took the ascendancy.

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[9] W. Wundt: *Gustav Theodor Fechner.* Leipzig, 1901; K. Lasswitz: *Gustav Theodor Fechner.* Stuttgart, 1896. G. S. Hall: *Founders of Modern Psychology.* N. Y., Appleton, 1907.

[10] J. Croley: *The Love Life of Auguste Comte.* Modern Thinker, 2nd edition, 1870. J. Mill: *Auguste Comte and Positivism.* Lond., 1907, 5th ed. A. Poey: *The Three Mental Crises of Auguste Comte.* Modern Thinker, 2d ed., Lond., 1870.

Emanuel Swedenborg[11] was born in 1688. He had his first vision in London in 1745 at the age of fifty-seven, became a seer and mystic, and changed from a subjective to an objective type of thought and developed his doctrine of correspondencies. The change was due to overwork and eyestrain, as was the case with Comte.

Giovanni Segantini[12] affords us perhaps the very best picture of a man who died at the age of forty-three of what might be called meridianal mental fever. His life was a struggle against an obsessive death-thought and a compensatory will-to-live. His first painting, at the age of twelve, was of a child's corpse, which he tried to paint back into life. Haunted by the idealized image of his mother, who died when he was very young and which he fancied he at length found in a peasant girl whom he made his model for years, this life-affirming motif was always in conflict with the thought of death, which in later years became an obsession. His struggle for sublimation was typified by his removal from the world and retirement to a high Alpine village, where the mountains, in the ideal of which it was his final ambition to embody all the excelsior motives of life, became his inspiration and so drew him that he had a passion for exploring their heights and once slept, almost to the permanent impairment of his health, in the snow. He had several narrow escapes from death, which afterwards always provoked greater activity.

He painted an upright corpse, the fall of which he thought, with the characteristic superstition of neurotics, was ominous. Death became, in the end, his muse, as his mother had been in the earlier stages of his development. He seemed fascinated with the idea of anticipating death in every way, even though this was a more or less unconscious urge. It was as if he revolted against the ordinary fate of man to await its gradual approach with the soporific agencies which old age normally supplies, and was anxious to go forth and meet it face to face at the very summit of his powers. At times he let down all precautions and took great risks, so characteristic a result of acute disappointments or of general disenchantment with life. He seemed to revel in the stimulus of the hurry-up motive, which often supervenes, but far more slowly, in those who realize that they have reached the zenith of their powers.

[11] G. Trobridge: *Emanuel Swedenborg, his life, teachings, and influence.* Lond., 1911. B. White and B. Barrett: *Life and Writings of Emanuel Swedenborg.* 1876. J. Wilkinson: *Emanuel Swedenborg: a biography.* Bost., 1849. Also Emerson's essay.

[12] See Karl Abraham's work of this title (Leipzig, 1911), based on Seravia's biography.

Love of his mother made him an artist, and he early married a wife who was the mother-image, which was never marred by any childish jealousy of his father, of whom he had known little, but was sublimated into love of mankind and even of animals. But his later greater love of death obscured the mother-image and even overcame his passion for home, which he had idealized, and dominated his exquisite feeling for and worship of nature, which he always regarded as charged with symbolic meanings.

At a crisis in the early thirties, a prevalent depressive mood gave way to the joy of creation, and his character and the method of his art seemed to undergo a transformation. His resentment at his own fate seemed to vent itself in the desire to banish, if not, as Abraham thinks, to punish, his mother by representing her in scenes of exquisite suffering. And when at the age of thirty-six his Alpinism made him at home only with the mountains, the break with his past life became more and more marked. The ordinary vicissitudes of life were not sufficient, and he wished to gamble not with the mere abatement or reinforcement of life but with life and death themselves. Even his dreams were haunted by a thanatic mood, and his superstitions were such that they almost made life itself a hateful dream. He tells us of fancying himself sitting in a retired nook which was at the same time like a church, when a strange figure stood before him, a creature of dreadful and repulsive form, with white gleaming eyes and yellow flesh tone, half cretin and half death. "I rose, and, with impressive mien, ordered it away after it had ogled me sideways. I followed it with my eye into the darkest corner until it had vanished." And this vision he thought ominous. When he turned around he shuddered, for the phantom was again before him. Then he arose like a fury, cursed and threatened it, and it vanished and did not return, for it was more obedient than Poe's raven. His ambivalent reaction against this was not only to work harder but to affirm that there was no death, and thus to revive much of the earlier religiosity of his childhood.

One of his pictures was of a dying consumptive which he transformed into one of blooming life. More and more the death-thought mastered his consciousness—almost as much as it did the soul of the insane painter, Wertz,—and provoked him to greater enthusiasm, and ever longer and more arduous programs for his future life. But from the subconscious he was always hearing more and more clearly the call of death, for which his deeper nature seems to have passionately longed,

while the opposite will-to-live became more and more impotent. All his prodigious activity in later life seems to have been thus really due to a subdominant will to die. When he fell ill for the first time in his life, "the dark powers of his unconscious nature came in to help the disease and make the disintegrative process easier and to invite death," as if love of it were the consummation of his love of all things that lived and the latter would not have been complete without the former.

Another case of a genius who hurried through the table d'hôte Nature provides and left the table sated to repletion when her regular guests were but half through the course was the German poet, Lenau.[13] Born 1802, he studied philosophy, law, and medicine successively, sought contact with primeval nature in America at thirty, returned to find himself famous and after a period of prolonged chastity becoming promptly infected with syphilis, became insane at forty-two and died of progressive paralysis at forty-eight. This is perhaps the most psychalgic of all diseases which afflict man, for it not only poisons the arrows of love and makes its ecstasy exquisite pain, but weakens all the phyletic instincts, like the climacteric, and, like it, brings hyperindividuation in its train. He knew both the joys and the pains of life, the depth of misery and the heights of euphoria. Eros and Thanatos were inseparable in his soul, and both had their raptures and inspired him by turns. Amorousness brought acute religiosity, and between his erotic adventures he lapsed far toward the negation of all faiths and creeds. When not in love his violin was treated as a paramour, and he forgot it when the tender passion glowed again in his soul. I doubt if any poet ever had a truer and deeper feeling for nature or was a more eloquent interpreter of all her moods and aspects. He exhausted both homo- and heterosexual experiences, remaining through a series of love affairs true to his Sophie, who was like his mother and with whom his relations were pure and whose influence was beneficent. Even before his infection, megalomania alternated with misanthropy, and he had all the fluctuations of mood which are such characteristic stigmata of hysteria. Spells of lassitude alternated with Berserker energy; masochism with sadism; excesses, including those of drink, with spells of depression. In his aggressive moods he stormed up mountains, which to him were symbols of mental elevation, until he was completely exhausted. Sometimes he fancied

[13] J. Sadger: *Aus dem Liebesleben Nicolaus Lenaus.* Leipzig, 1909, 96 p. See also his biography by B. E. Castle.

himself a nobleman or even a monarch, and always strove to reduce all about him to servile satellites. The Job-Faust-Manfried motive often took possession of him, and sometimes he played his violin half the night, dancing in rapt ecstasy and unable to keep time. In his periods of self-reproach after orgasms of ecstasy he became ascetic. His poetry and converse were, especially for such a man, singularly pure. He said he carried a corpse around within him.

Most insanities are only an exaggeration or breaking out of previous traits, and this was exceptionally so in his case. At one time he seemed to want to break with all his old and to find a new set of friends. In the high temperature at which he lived, with so many impulses which were either frustrated or crucified, always hot with love or its ambivalent hate, he died—not, like Segantini, because he was hypnotized by death at the very acme of his power and willed it actively, though unconsciously, as surely as if he had committed suicide, but he rather turned to it from sheer repletion of life, most of the experiences of which he had exhausted. It was as if a congeries of souls took possession of him by turns, so that in middle life he had already played most of the parts in the drama and thus knew it far more exhaustively than those who lead more unitary lives, however prolonged they may be. He was by no means theoretically a miserablist or even a pessimist, but was simply burned out (*blasé, abgelebt*). As if to anticipate the *Weltschmerz* that his diathesis made it certain would later become acute, his passionate love for nature, deep and insightful as it was, did not prove an adequate compensation, and we cannot but wonder whether, if he had lived more normally and without infection to fourscore, his life would not inevitably have ended with the same, though less acute, general symptoms. Yet even he never cursed the fate which brought him into life or inveighed against his parentage. His life was like a candle in the wind blown every way by turns, now and then flaring up and emitting great light and heat and now almost put out, and smoking, sputtering, and malodorous in a socket like a blue flame just before its final extinction.

The psychograph of the poet Heinrich von Kleist (x 1811, *a. e.* 34) affords another example of a genius who died of premature old age near the period of its dawn or at the critical turn of the tide.[14] In the University his passion for omniscience impelled him to enroll for so many and diverse courses that his professors protested. Later he actually tried eight

[14] J. Sadger in *Grenzfragen des Nerven und Seelenlebens.* 1910, pp. 5-63.

and attempted to sample other callings. "He would have liked to be everything." In the space of fourteen years no less than nine women had engaged his fancy, although none had made a deep or lasting impression. He had also a veritable lust for traveling, and after every important event in his life resorted to this kind of fugue from reality to lose himself in new scenes. "There is nothing consistent in me save inconsistency." His demands on his friends, and also his ambitions, knew no bounds. He would "tear the crown from Goethe's brow." He felt he must storm all heights and do it now or never.

He, too, was bisexual in his instincts. He glorified purity and sobriety as over-compensation for his shortcomings in both these respects. Much as he did, he never could complete the great work he had long planned, and despair at his impotence to achieve his ambitions made him at last take flight to insanity as a refuge and finally to joint suicide with a woman. Late in life he lost the power to distinguish between fact and fancy, so fully had his writings become a surrogate for life. Wagner said that if life were as full as we wish it to be, there would be no need of art, and von Kleist's biographer seems to doubt whether to call his end a victory or a surrender. His wooing of death was not, like Segantini, a continuation and consummation of the thanatopsis mood of adolescence but was rather due to a growing endogenous lethargy and apathy. He lost his appetite for life, from which he had expected more than it has to give—even to the most favored—and thus at the critical age when men are prone to weigh themselves in the balance, he found incompleteness and inferiority both within and without and so threw himself into the arms of the Great Silencer. Everything conventional had long since palled upon him. "His early fixation upon an unattainable goal was broken down, and he pursued the unattainable until he fancied he found it in death." The outbreak of the Franco-Prussian War seemed for a time to afford him an outlet for his pent-up desires without compelling him to resort to illness.

In his ground *motif* Maupassant[15] belongs to the same category as Lenau and von Kleist. He inherited neurotic trends from both parents and died in 1893 at the age of forty-three, having experienced most of the episodes of life and during his twelve productive years written fourteen volumes and climbed to the very summit of the French Parnassus. His morbidity was partly congenital and partly metasyphilitic.

[15] G. Vorberg: *Guy de Maupassant's Krankheit.* 1908, 27 pp.

Had he lived his simple life in his Normandy home instead of coming to Paris, he might have survived; but he fell a victim to narcotics, ether, hashish, morphine, cocaine, Bacchus, and Venus. Like so many great men afflicted with the same disease, his symptoms showed many marked departures from its ordinary course, and before its active stage, his divarications in the fields of various abnormal symptom-groups were many. His passion for the horrible is perhaps best illustrated in his shuddering "Horla."

Gogol's[16] life (x 1852, *a. e.* 43) was full of contradictory completeness and incompleteness. He, too, desired not only to touch but to express life at every point, and his realism was in fact only self-expression. He lived through life as a fiction and tried to cast this fiction into the mould of actuality. He was a failure in nearly every department of life he tried, and was a man whose character was made up of samples of every type of human nature. In him the creative impulse was not a retreat from life but was an attempt to make a bridge between it and his soul. He was haunted by a feeling of inferiority, but this it was the passion of his life to overcome. When his aggressive feelings were strongest he produced most. He failed as actor, teacher, clerk, and succeeded as poet and novelist because thus he could best wreak his inmost self upon expression. He was finally obsessed by a religious mania, became a mystic, and sought salvation by fasting and self-denial. Fear of death was a life-long obsession, and he strove to conquer both love and death together by seeking and defying the latter. He decided to die by fasting and kneeling before the picture of the mother of God. "Groaning and crying out with his last strength, he had dragged himself to the symbol of the highest feminine completeness, and when he found the 'Glorious Virgin' of his dreams his dissolution came." In his last moment he seems to have felt that he had overcome both death and woman—but only by yielding to them—and believed himself to be a martyr. It was the difficulty he found in bridging the chasm between his solitary, child-like self, and the real world that made him a great creator of fiction, a practical failure, and a madman.

J. V. Scheffel[17] exhibited a range of moods from humor and jollity to melancholia and showed an entire absence of eroticism in his poems, which was more or less compensatory.

[16] Otto Kaus in *Schriften des Vereins freie psychoanalytische Forschung.* No. 2, 1912, 81 p.

[17] P. J. Möbius: *Ueber Scheffel's Krankheit.* 1907, p. 40.

The bisexual instinct (he not only looked like a girl but sometimes disguised himself in woman's attire) was evoked by an earnest effort to see the world as woman did. He had an extraordinary variety of morbid attacks, hypochondria, delusions, headaches, morbid fear of death, anxiety, nightmares, weeping, etc. Schurmann even goes so far as to think that a cyclothymic diathesis or a tendency to periodic attacks of various psychic morbidities is characteristic of genius, which finds occasional relief in attacks of insanity, like Cowper, Rousseau, Tasso, Hölderlin, and many others, and ascribes this in part to a hunger for a life larger and fuller than normality or sobriety can afford. This, however, is forbidden fruit, for nature punishes the enjoyment of it—if not by premature death at least by premature satiety with life.

John Ruskin's lifeline had marked nodes, the chief of which may be characterized as follows. Up to the early forties he had lived and written under the dominant influence of his father, who held very conservative views of religion, but the foundations of the son's faith were shaken and the tenet "which had held the hopes and beliefs of his youth and early manhood had proved too narrow. He was stretching forth to a wider and, as he felt, a nobler conception of life and destiny but the transition was through much travail of soul."[18] He wrote, "It is a difficult thing to live without hope of another world when one has been used to it for forty years. But by how much the more difficult, by so much it makes one braver and stronger." And, again, "It may be much nobler to hope for the advance of the human race only than for one's own immortality, much less selfish to look upon oneself merely as a leaf on a tree than as an independent spirit, but it is much less pleasant." Cook says that "he had been brought up as a Bible Christian in the strictest school of literal interpretation but he had also become deeply versed in some branches of natural science, and the truths of science seemed inconsistent with a literal belief in the Scriptures." He had been much influenced by Spurgeon, whom he knew well in private life, but made no secret of his adhesion to Colenso's heresies. No one understood the inmost causes of his muse as he grew melancholic. He was exhausted, dyspeptic, wanted to reconstruct society, had "the soul of a prophet consumed with wrath against a wayward and perverse generation," but also the heart of a lover of his fellow-men filled with pity for the miseries and follies of mankind. His mother recognized his tendency to misanthropy, and only at forty-two did he break

[18] E. T. Cook: *Life of John Ruskin.* Lond., 1911, Vol. II, p. 19.

away from parental discipline. "A new epoch of life began for me in this wise, that my father and mother could travel with me no more, but Rose [La Touche, the young girl, with whom he was in love and who died when he was in the early fifties and left him forlorn] in heart was with me always, and all I did was for her sake." This was his first "exile." The clouds which had more than once lowered over his life settled in old age, and he died in 1900, at the age of eighty-one. During most of the last ten years, he presented one of the saddest of all the spectacles of old age, "dying from the top downward." He was apathetic, monosyllabic, could write little, and spoke less; and but for the kindly ministrations of Mrs. Severn and the thoughtfulness of Kate Greenaway almost nothing either in Brantwood or the great world without retained interest for him.

The middle-age crisis in Nietzsche's life began when he left Bayreuth in August, 1876, after the performance of *The Ring of the Niebelung*. He was then thirty-two years of age, and now it was that his disenchantment with Wagner, whom he had regarded as a superman and often called Jupiter, "one who might bring the type of man to a higher degree of perfection,"[19] began. He had thought Wagner "near to the divine," but he now found much of his music dull and realized that in *Parsifal* he had violated his own atheism as a concession to the public, and so he "refused to recognize a genius who was not honest with himself." He abhorred Wagner's new "redemption philosophy," but for months and years could not bring himself to an open break with him and was for a long time plunged in the depths of gloom. He now became truly lonely and went through a complete inner revolution. He realized that he must henceforth stand alone and work out the problem of life by himself. His anxiety as to how the venerable Wagner would receive his *Human, All Too Human* was pathetic. When he found he could not publish it anonymously he revised and toned down many of his criticisms; and deep, indeed, was his grief when, despite the almost fawning letter which accompanied a copy of his book to Wagner, the latter lacked the greatness of soul to understand his sincerity, and broke with him forever. At the same time he was emancipating his thought from Schopenhauer, who had hitherto been his sovereign master in the philosophic field.

Now it was that he almost completely wrecked his life by living according to the precepts of Cornaro, and his letters

[19] Frau Foerster-Nietzsche: *The Life of Nietzsche.*

show the intense struggle with which he finally resolved to find his own way through life and to abandon his soul to self-expression. He finally resigned his chair of classic literature at Bâle, and a little later sorted his manuscripts and commissioned his sister to burn half of them. This she refused to do and it was just these that were the basis of some of the best things he published later. After trying residence in many places and various cures, and experimenting with many regimens, he finally resolved to become his own doctor, and it was by his own efforts that he succeeded in prolonging the efficient period of his life. But he felt he had at last struck the right road in his *The Dawn of Day,* which marked the opening of his campaign against morality. From this time on, too, he had a deep, new, intense love of nature, and was inspired henceforth by the conviction that he must be the midwife of the superman in the world. This apostle of a "New Renaissance" was not unlike his Zarathustra, who retired to the mountains at thirty and at forty came down to the haunts of men with a new message for them.

The theme of Rostand's "Chanticleer" is the disillusion of that gorgeous barnyard fowl from the fond and at first secret conviction, which he later confessed to the pheasant hen, that it was his crowing that brought in the dawn and that if he failed in this function the world would lie in darkness. The tragedy of the play is the slow conviction that the sun could rise without him. In Nietzsche we see the exact reverse of this process. His delusions of greatness grew with years and eventually passed all bounds of sanity. He became jealous of Jesus and came to believe that he had brought the world a new dispensation, and that his work would sometime be recognized as the dawn of a new era.

Robert Raymond[20] thinks it is pleasant to lie at anchor a while in port before setting sail for the last long voyage to the unknown. The passage from late youth to middle age has many of the same traits as growing old. We suddenly realize, perhaps in a flash, that life is no longer all before us. When youth begins to die, it fights and struggles. The panic is not so much that we cannot do handsprings, but we have to compromise with our youthful hopes. We have been out of college perhaps twenty years. Napoleon lost Waterloo at 45; Dickens had written all his best at 40; and Pepys finished his diary at 37. We lose the sense of superfluous time and must hurry; we feel the futility of postponements, and accept the philosophy of the second best as not so bad; we become

[20] "On Growing Old." *Atlan.,* 1915, p. 803.

more tolerant toward others and perhaps toward ourselves. We must not be too serious or yearn too much for a lost youth. It is like the first anticipations of fall in the summer.

F. von Mueller of Munich[21] thinks we can never tell when old age begins. Involution is closely connected with evolution from the start. The lymphatics, tonsils, and thymus begin to atrophy as soon as the development of the sex organs comes. Among English button workers it was found that young men did most; that they did 80% of the work they formerly did, between the ages of 40 and 45; 60%, in the fifty-fifth year; and 40% after sixty-five. The power of observation is so great in youth that 70% of all our acquisitions are made at this stage. Originality comes later. Age is more serious. There is less adaptation because habit is growing rigid. The emotional life stiffens, and the intellectual narrows. There are more doubts. There is a stronger-felt need of recognition from others which is very deeply experienced in many ways. The capacity for producing original ideas comes latest of all. It is generally thought that the highest physical development is before 30. Some investigators think that physical deterioration begins with the brain, but this is doubtful.

Bruce Birch[22] thinks the wreckage of youth spectacular; that of old age less discernible because more subtle and internal. The old should come to the fullest possible maturity. Youth must be served. The church focuses on young men. The old age here chiefly regarded is from 45 on. Most lack intelligent encouragement to go on. They are thought too old to need advice but to only want comfort. Habits are supposed to be formed. The old are not thought to be heart-searchers.

The fact is, senescence has very new and great temptations, viz., to go on in the old way of habit and belief. The temptations of the old are largely of the spirit but sometimes also of the flesh and the devil. It is hard to keep up the struggle for personal righteousness and there are periods of storm and stress. The church has not done its duty here. Most think the most dangerous period is that of wild oats—between 16 and 26—but this writer says it is between 45 and 65 where there is the most wreckage.

1. There is a tendency to low ideals. Youth tends to lofty ideals and to realize them, but now hope often fails. With

[21] See *Sci. Amer. Sup.*, Nov. 15, 1919.

[22] "The Moral and Religious Psychology of Late Senescence." *Biblical World,* 1918, p. 75.

the abbreviation of life there is loss of initiative, perhaps sickness of hope deferred. Age thinks it has become all it can hope to be; so enthusiasm wanes and the *tedium vitae* makes us feel the game is not worth the candle, that we are not willing to pay the price of sacrifice and struggle to maintain high ideals. So we aim lower. The excelsior motive is lost. So there is often a degeneration of moral character. Cheap pleasures satisfy—perhaps even those of the table, for this is the easiest way of reviving some of the tendencies of former life.

2. Hence lowering and liberalizing of conduct creeds. The frontal lobes shrink as the period of endeavor wanes. The edge of desire is dulled and so is the power to distinguish right and wrong, true and false. "Twice a child, once a man." The powers of imagination, aggression, and resistant effort, flag, and we are content with the beaten path because the motor areas have decayed. There is ruttiness, the brain is set for habitual reactions, there are fixed points of view, the apperceptive mass is allowed to interpret all new ideas, and these cannot change it. Thus it is hard to adjust to progress. There is less resistance, self-control, courage for great deeds and high purposes, to ask advice of and be influenced by younger men. Politicians often recognize this in putting forward respectable elderly, pliant candidates. One is often weak where he thinks himself strong because there is no fool like an old one. He may yield to selfishness, acquisitiveness, curiosity, secretiveness, envy, jealousy, avarice, and other primitive traits. There is too frequent moral collapse here.

3. There is a lessening of emotional intensity, or a stodginess. The imitative, religious, adventurous, belligerent, imaginative, initiative traits are developed early, and the younger a man is, the greater is the dominion of the emotions. But later poets turn to prose and others to more didactic activities. Scientists, philosophers, and statesmen are best when they are through this period. Disappointed men now become cynical, morose, petulant, or vicious as the intellect only rules. If the social or gregarious instinct fails, society may bore, friendships decline, and age may be lonely. Or, again, it may be a prey of many dispositional, emotional, and obsessive feelings which may become insane. The patient may live in a logic-tight compartment. The obsession may be a hobby or a system of connected ideas with a strong emotional tone (complex). These are tendencies arising from instinct. When the social and sane instincts lose in the conflict, interest in the present may decline to indifference, and the obsessions may

focus on real or fancied errors of the past—duty to a dead child, a business failure, etc. At any rate, there is a tendency to indulge temperament.

4. Failure in religious teaching. Versus "Be sure your sin will find you out" all the old realize that they have done much sin that is not found out which, if it were exposed, would bring suffering, disgrace, public execration, loss of vocation, property, friends. To fear only the consequences of evil is bad, and since they have escaped they feel a certain contempt of secular and moral law and take greater risks. The old man prefers to be respectable and righteous, but he does not care if his unrighteousness is known or suspected if it is not made too public. Thus the old dread exposure more than they do sin.

5. The church offers too little to the old but wants to see old age tap new reservoirs of energy, vigor, joy, and enthusiasm. The best it can offer is faith in Jesus. Many would say it offers a larger intellectual view.

It would be easy to multiply both cases and testimonies like the above. From such data I draw the inference that, leaving out of consideration here the initial prepubertal stage and the terminal one of the post-climacteric or old age proper, all the rest of life which lies between these is divided into two parts, adolescence and senescence, that the latter begins where the former ends, and that all that we have thought characteristic of middle life consists of only the phenomena which are connected with the turn of the tide. The reasons for this extension of the application of these terms will be set forth in detail in a book on senescence, now nearing completion, complementing my earlier study of *Adolescence*.

TEACHING CIVICS AS A SCIENCE IN THE JOLIET TOWNSHIP HIGH SCHOOL

By R. R. Smith

In a previous article in the Pedagogical Seminary on this same subject I attempted to establish the fact that civics should be taught by the laboratory method, reaching my conclusion by deductive reasoning from the major premise that science should be taught by the laboratory method, and the minor premise based upon Webster, that civics is a science. I gave the history of four and one-half years of preliminary work and the results of just a few months of definite experiment based upon those years of training. It is the purpose of this article to continue the history of the experiment and to draw the few conclusions that may be tentatively reached at the close of the fifth year.

Before going into further details of the experiment proper it will be well to describe as many of the conditions governing the experiment as seem to have a direct bearing on the reader's understanding of the results. This is not a brief in favor of student government as such. It is important that the reader understand that at the beginning. It is, however, the record of an experiment carried on with the assumption that civics is a science and that, granting such to be true, there is no logical way to teach it save by the laboratory method. It is based purely on the evolutionary theory of government as opposed to the revolutionary theory, or, stating the same thing in different terms, it is based on the theory that government must be a growth and that growth takes time. While this is true, it takes into account the fact that up to a certain point, growth may be made to take place more rapidly by favorable environment and the right sort of nutrition. Pursuing the analogy further it assumes that though governmental growth must be evolutionary, evolution can be made to progress many times more rapidly than it has progressed in the past and still not have its rapidity of progress be the result of undue stimulation. It assumes that failure to progress has been largely due to blind acting or at best acting as the result of accidental inductive reasoning—a sort that is continually open to error and has continually to change its tenets of faith. By the study

of government in a strictly scientific manner it should be possible to hasten its evolution just as it has been possible to hasten the development of other growths by application of knowledge gained through science.

Of necessity, though this article is scientific, the results do not lend themselves to scientific measurement. The reader will see that such is true because of the size and complexity of the problem. Results then will be qualitative rather than quantitative. But, even so, they should have the value which qualitative results always have—the value of pointing in a direction though unable to measure how much so. Just as in chemistry qualitative analysis comes before quantitative, in a study of this sort qualitative results must be reached before quantitative ones will have any real value. In other words, one needs to know whether the substance is gold or not before he goes to the trouble and expense of measuring it. Accurately to measure dross can lead to nothing.

For the laboratory we have a high school with a total enrollment for the year of eighteen hundred and with a daily attendance in the day school of fourteen hundred. The student body is not homogeneous. It is composed of boys and girls from twenty-seven different nations, some from homes of millionaires and others from the homes of workers in mills and factories. More of them come from these homes than from homes of rich people; yet few come from homes of the very ignorant among the workers. Children from the homes of the very ignorant do not get as far as the high school.

The school has more girls than boys. The average is about eight hundred girls and six hundred boys. Members of the faculty are older than teachers in high school usually average. More of them are above thirty than under. Some of them have been with the school for more than twenty-five years. There is a smaller per cent of change in the faculty annually than in most schools. Out of a faculty of seventy there will average from twenty-five to thirty men. Salaries are higher than in most high schools—the highest in Illinois outside of Chicago. Many of the teachers have come from small colleges and normal schools. All have been chosen for marked success in their work. It is difficult to say whether the attitude of the faculty as a whole is reactionary, conservative, or mildly liberal. It is probably safer to say the last. Certainly the teachers are not prone to rush into new ventures. Their tendency is rather to question new methods and devices and to go slow about admitting their worth. Such is true of the faculty as a whole as one would expect from a group of men

and women so trained and ranging in age from twenty-five to sixty.

For more than a quarter of a century the school has been under one superintendent, Dr. J. Stanley Brown, who has made a number of contributions both in secondary school work and in the work of the junior college, and who has been actively connected with the N. E. A. More than that Dr. Brown is one of the leaders of all types of community work and is constantly in demand for organization purposes when big things are to be carried through by the community. In other words, he is the type of superintendent who is more than a mere school man—a man who inspires confidence in the men and women with whom and for whom he has worked. I bring this into the article because it is one of the factors having direct bearing upon the experiment. His assistant superintendent, C. E. Spicer, has been with the school about the same length of time. Together they have gradually worked out governing machinery for the school which year by year has grown.

Most important of these governmental factors are the cabinet system of government which does away with all departments as such, the advisory committee system, a plan for making certain teachers directly responsible for certain students throughout their four years, and supervised study which makes possible the great part of the study of pupils in school under the charge of the same teacher who hears them recite. All of these governmental factors provide for teacher control, but do not in any way bring in the student as a participant. This is not meant as a criticism. It is stated merely as a fact having to do with the experiment. Another element which should be mentioned at this point is the influence of the assistant principal, R. H. Bush, who perhaps would prefer to be characterized as a sane modernist. He fits into all the accepted governing machinery of the school, yet is constantly seeking to make the work function more articulately with the life of the student.

His attitude in history and civics teaching has had a very direct bearing upon the experiment, and his relation to the school government has had a bearing also. Systematic and uniform methods of handling study rooms, his contribution, made easier the experiment in government.

Another factor which I shall describe, but which I do not feel prepared to estimate the effect of, is the prison or detention room to which offenders against school discipline are sent for varying lengths of time at the close of the day. It is

purely punitive in nature and hence is negative instead of positive in its results.

Military training, which has been introduced as compulsory this year, has perhaps some bearing upon this experiment; but the work of the small group of cadets, which was in existence last year and to a certain extent the year before, had more real bearing on the experiment.

The beauty of the building is another contributing factor. In the corridors are more than five thousand dollars' worth of great paintings and statues. The building itself is finished in marble. It was planned as a unit so that every addition fits in as a part of one big whole.

One other factor and we shall be ready to proceed to the experiment itself. The school has a band which is self-governing and which has been honored by being chosen as the official band for Camp Steever and for Camp Pershing. A. R. McAllister, the director, who is one of the manual training instructors, is thoroughly in sympathy with student participation in school government and has been very successful not only in handling his band along such lines but his manual training work as well.

I am now ready to take up the history of the experiment at the point where I left it in the previous article. In that article I told only of one period in one room. Shortly after the article was written the idea of self-government which during the semester had been confined to the one sophomore group jumped from the sophomore room to the junior room and then ran through all twelve periods.

Since this can only be of real service if all essential details are given in order of sequence I shall relate just how that jump came about. One Saturday I was talking to a teacher who had charge of the study period in 399, the junior room. I showed her an article, "*Democratizing a High School of Eighteen Hundred,*" which I had written for one of the numbers of *Education.* I found that she was an enthusiast in student participation in government. The very next week she started the work in her room. It succeeded beyond her hopes, even, and from that period it spread to the other periods. In all of them it succeeded. More than to act in an advisory capacity I purposely took no part in organizing the junior work. Leaders of the movement were in my classes which were self-governing. They took pride in working out the arrangements themselves in connection with the teachers in charge of the different periods.

The teacher in general charge of the room and in a loose way responsible for all twelve periods, was a history teacher in hearty sympathy with what the students were doing. She helped them in every way possible both in her own periods and in those of the other teachers. During all this time student government had no official recognition, a fact which has an especial bearing upon the value of the results of the experiment. That does not mean that Dr. Brown and other officials were hostile or that I was in any manner opposing their direct commands. I had asked for permission to organize my room and the other rooms. I had not received such permission. At the same time I had not been refused. It simply remained an individual matter and this was much better as far as the value of my results is concerned. If student government had been adopted as a definite official policy at that time, it would have changed the development from evolutionary which it had been, to revolutionary, at least to a certain extent. As it was, the movement developed just as rapidly as there was a demand for it from the students themselves and no faster. That does not mean, of course, that every junior was enthusiastic; but no junior opposed it.

Seniors did not organize in spite of the fact that they had the most homogeneous room in the building. As I explained in the first article, they had a different type of training. They did not feel that it was right that they should be expected to assume responsibility. There were individuals here and there who did, but as a class they did not. Had I been merely interested in bringing student government to one hundred per cent organization in the building during the year 1918, I should have organized them any way.

A very interesting experience was reported from a group of juniors who had the self-governing idea. Their teacher, the history teacher in charge of room 389, the teacher I previously spoke about, was called to the office. She was gone almost the entire period. When she got back to her class it was progressing and getting the work done. One student was in charge and others were so interested in the discussion that they paid no attention to the teacher when she came into the room. She went to the back of the room, sat down and watched the recitation. During the last three months of the school year instance after instance of this sort was reported by various teachers some of whom were believers in student government and some of whom were not.

I shall now go back to my sophomores. During the last two months of the school several more of the periods organ-

ized and if I had not thought best to restrain the growth temporarily, all of them would have done so. It is with the first two periods in the morning that we shall find our greatest interest. It was upon these that I placed the full responsibility of governing themselves with no teacher at all in the room day after day. Their teacher needed those two periods to put upon a centennial pageant which the school was to give in June. This gave the opportunity for offering the periods complete self-government. It worked. It worked so well that the students received compliments from the office. With doors wide open so that the room was in view from the hall, teachers would go by and find everybody hard at work, only a boy or girl at the desk.

The most severe test for them came one day when a number of civics classes were preparing for an election and had gained permission to go through the rooms in real "grown-up" electioneering style making all the noise possible. Just imagine the peace celebration at its most noisy stage and you will have the picture of what was going on. Imagine a dozen students going through a study room beating on drums, tin pans, joints of pipe, and every sort of thing that would resound and think what the strain would be even with a teacher in charge of the room. These two self-governing periods went through this ordeal with flying colors. Students looked up, as they were supposed to do; but there was no disorder of any sort. That probably gained more recognition for the movement than any other one incident.

Just one more incident. Every year juniors and seniors have a class "scrap," not a contest conducted in a civilized manner on an appointed day, but the typical barbaric tradition which is or was supposed to be a necessary part of academic life. This "scrap" was a source of anxiety as all lawlessness is. Each morning some new blot would appear on the landscape. It might be senior red paint on the walk to-day; to-morrow it would be junior blue paint on the side of the smoke stack. Last spring the same "scrap" started. But that was all. One night the juniors failed to retaliate; they had reached the conclusion that they were doing a bigger thing than putting paint higher than the seniors and told them so. Student-government had made them solve the problem that without such government had caused trouble for 25 years and likely would have continued to do so. It is enough to say that there was one surprised group of seniors; and it took some members of the faculty even more completely by surprise. By the close of school, then, the movement had

gained considerable headway purely as an individual movement with no official recognition. It is interesting to note that leaders of the movement themselves were afraid that it was going too fast. Instead of going wild and wishing to revolutionize the school government the three students who were most interested and who did most to make it a success advocated making it move more slowly. It is interesting further to note that almost without exception officers were elected who could do the work. In no case which came under my notice was this not true. This was another evidence that the movement had come in an evolutionary way.

At the close of the school year Dr. Brown called me into his office and told me that he wished me to continue the work the following year. I met the same hearty response from Mr. Spicer. It had given indication of what it could be made to do.

This year, because this whole thing is an experiment and not something that I am rushing to completion, I have allowed it to take its own course scarcely offering a suggestion. This has made it move more slowly than it otherwise would but it has shown that it was not a puppet-like affair which had to have me present to manipulate it. Both the senior rooms and the junior rooms are organized and are working nicely. In these rooms are many freshmen who are being introduced to the movement gradually.

What about conclusions to be drawn? The incidents I have told about spoke for themselves. This experiment which may have been duplicated in dozens of high schools over the country for all I know, does not prove, but it indicates, I think, that the result which I reached by deductive reasoning, that is, that civics as a science should be taught by the laboratory method may be justified by inductive reasoning as well; this after all, is the real test of a proposition.

In these days when reconstruction is in the air and when the world has just finished paying many millions of lives in order to make the "world safe for democracy," it certainly is the part of civics teachers to make their subject function one hundred per cent in preparing their students to live. In a world that is calling for elimination of all waste it certainly is the part of civics teachers to use the laboratory facilities which lie ready to their hands, which will not only not cost any additional money to be taken from the patrons, but will actually mean a saving of thousands of dollars in every large school and of something perhaps even in the smaller ones. Our problem is to utilize energy.

In conclusion I wish to emphasize the fact that I am talking about student-government as the laboratory side of civics and not as a governmental device. It is a subject to be taught just like English and algebra. If looked at in that way all well and good; if looked upon simply as a device for governing students with the idea that when once student-government is in effect the duty of the teacher is over as far as discipline is concerned, I personally think that it should be left alone.

QUESTIONNAIRES AND FOLLOW-UP LETTERS

By E. E. Lindsay

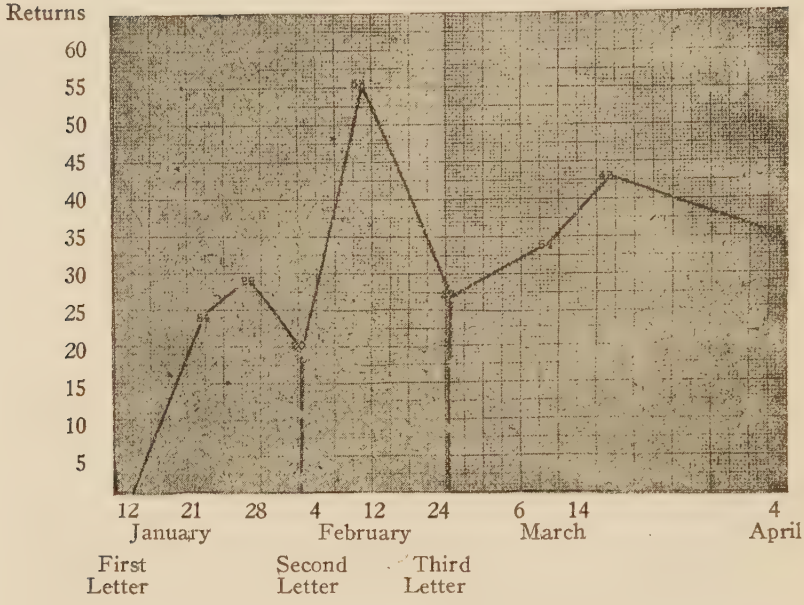
Perhaps the majority of theses written today are founded on questionnaires. So numerous have these become that some people who are in a position to give to the investigator knowledge without which he would later be unable to make valuable contributions have fallen into a negligent attitude on the matter. The time has arrived or is about to arrive when the simple questionnaire, no matter how skillfully constructed nor embodying what wise principles of psychology, fails to get a response adequate to the needs of the problem.

The author has had occasion during the past eight months to send out some ten questionnaires with a total initial circulation of 2,782. He has during this time had some experience in the matter of securing returns from the questionnaires, and believes that the experience with the follow-up letter as compared with the returns from the initial questionnaire may perhaps be of benefit to others who find that the use of the questionnaire is essential to the solution of their problem.

Of the questionnaires sent out three were of such a nature as to make some form of follow-up desirable. On these three a total of 1,145 follow-up letters or cards of different issues were used. For one of these series the following graph represents the results in returns and periods of time.

The footings at the bottom of the chart give the dates both of sending and accounting. Every other vertical line represents one day. The heavy broken vertical lines represent the follow-up letters or cards as indicated at the bottom of the chart. The figures at the right are in terms of replies received. For convenience in reading these figures have been carried out and inserted on the line representing the day on which they were counted. Thus the curve starts out with zero, returns the 12th of January, 1921, the day on which the initial letter was sent. By January 21st, 24 returns had come in; from the 21st to 28th, 29 returns. Between 29th of January and the 4th of February, however, the returns had fallen to 20. The curve is descending rapidly and without further incentive all the returns would soon have been in, probably by the 24th about 12 more would have been received and the

EFFECT OF FOLLOW-UP LETTERS ON QUESTIONNAIRE WORK



books closed. At this, however, a postal card was sent out to all who had not reported with the result indicated on the chart, within the next eight days. The returns by the twenty-fourth indicated, however, that unless something was done the line would soon reach the zero mark. Another letter was, therefore, sent out containing a duplicate of the first form mailed a month and one-half previous. This within the next 12 days changed the trend of the curve to a decidedly upward trend which was still further increased by the 14th. From this point began its gradual final descent, no further follow-ups in this case being deemed necessary or advisable.

The effects and possible results of these letters in terms of the final total are perhaps interesting. The following table gives these results:

Letter	*Actual returns*	*Total probable*
1st	27.6%	32.1%
2d	30.2	65.1
3d	42.25%	

Combined results of possible returns..... 39.25%

This table reads, the first letter and forms brought of the final returns, 27.6%. If no other letter had followed this one the trend of the curve indicates that the final returns would have been but 32.1% of those actually secured. The second letter, with the cumulative effect and leftovers of the first, brought in 30.2% of the total. The combined results of these two letters would have been but 65.1% of the results finally secured.

The findings of this graph and table seem rather definitely to prove that in this particular case the follow-up card and letter were of much greater value in securing returns than the original letter. The relationship, including with the follow-up card and letter the cumulative effect and leftovers of the original, stands in proportion of 67.9 to 32.1 in favor of the follow-ups. That is, the follow-ups brought in 111.5% as many returns as the original. This proportion and percentage is called to the attention of those who have secured poor returns from questionnaires, particularly where they were necessarily somewhat involved and entailed considerable work on the part of the party to whom they were addressed. It may be said in defense of the small final percentage of possible results that the questionnaire involved in this case called for a large amount of tedious and routine work from a class of officials who have been for the past few years rather burdened with calls for information.

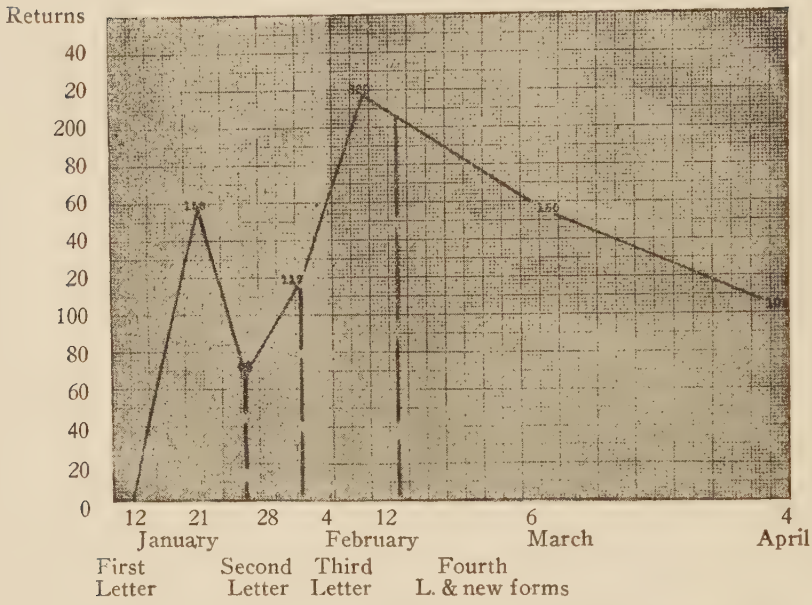
Graph number one and its discussion presents one typical method of handling follow-up work, namely, that of waiting until the trend of returns indicates that the effect of the former letter has practically been spent before sending out the next. The following graph represents another method on a totally different situation.

Graph II

The explanations of this chart are exactly similar to those given for reading chart one—dates at the bottom and cases at the side, cases returned indicated on the curve.

The original letters were sent out on the 12th of January, 1921. These letters within nine days brought in replies on 158 cases. In the next seven days the number of cases was 68. The trend of the curve here shows the necessity of further action. It indicated rather sharply that the effect of the first letter was about spent. One was rather safe in assuming that most of those who would reply to that letter had already done so. They had at least been given a due interval

EFFECT OF FOLLOW-UP LETTERS ON QUESTIONNAIRE WORK



of time. Therefore at this point the first follow-up letter was sent out. Within the next six days this letter brought in 117 cases, turning the trend of the curve to a very successful upward direction. At this the use of the follow-up letter as illustrated in the preceding chart was departed from. In accord with the theory of recall that the recall should come soon after the original impression and be repeated at gradually increasing intervals, the downward trend of the curve in this instance was not waited for, but the second follow-up letter was sent out approximately one week from the first. This increased the rate of returns as seen by the dizzy height of 220 cases. Following the theory above outlined the third follow-up letter was sent out at a period of time from the second equal to twice that of the second from the first. With this letter went also follow-up forms. The cumulative effect of these four letters kept the curve in a gradual descending slope, as seen on the chart, until eventually, at the final accounting on April 4th, there were on hand 91.5% of the possible returns. It is believed that, in general, this method of

using the follow-up letter is the better of the two described. The material called for in this instance required a rather large amount of labor on the part of public officials who are not as a class particularly marked for their willingness to furnish information for nothing. A conservative estimate of the time involved in filling in such a questionnaire as this study presents would be half a day. On many of them much more time was without doubt necessary. Yet by means of these follow-up letters the returns were placed at 91.5% of those possible against the probable total returns had but the original letter been used of 27.25%. This is a percentage of 236 in favor of the follow-up work.

In the face of the returns by the use of follow-up letters as shown by these two graphs it seems a fair assumption that the follow-up letter is entitled to consideration in questionnaire work.

SPEECH DEFECT RESULTING FROM ETHER SHOCK

By Laura G. Smith

An instance of temporary speech defect resulting from an operation reveals an interesting case of the psyche under ether. A few remarks relative to the past experience of this adult female are necessary for a full understanding of the case.

The patient, who had taken ether but once, ten years previously, had then suffered an intensely distressing experience. In taking it no physical resistance was made, and no mental resistance was intended, but the physician administering the anaesthetic remarked that she had unintentionally exerted a strong will against it, which necessitated a much larger dose than usual. This operation, which was performed on the large toe of the left foot, lasted an hour. The patient on coming out of ether was very talkative, but logical in all her remarks. Everything spoken of could be traced to an experience, and the association of ideas was unusually strong. The anaesthetic affected the patient so badly that for over a year after the operation she suffered greatly from what she termed "ether waves." Whether this result was due entirely to the ether or in part to the shock her nerves sustained on coming out of it is a question. (The patient's father was taken with an acute attack of Bright's Disease that very evening, was in coma at 1:15 a. m., and died in a few hours).

The so-called "ether waves" consisted of the most frantic rolling sensations, like tossing on the waves of the ocean, felt immediately upon retiring, or whenever she was in a reclining position. A grasping sensation went with it at times, which caused the sufferer to clutch the bed or bed clothing for the minute. These same sensations were felt when the patient was going under and coming out of ether.

Ten years later ether was taken, this time in a hospital, when the patient's throat was operated upon. This operation, consisting of tonsil and adenoid removal and scraping of the nose, lasted twenty minutes. Although the patient dreaded the ether she found it much easier to take this time than before, but coming out of it was far worse. When almost under the influence she heard one of the nurses say, "Oh, I guess

you'll have to get some more! She isn't under yet." She also heard one of them remark something about the 2:15 train. This may be in part the cause of her raving about a train on coming out of the ether, yet, a physician present who had administered ether at the first operation knew at once when he heard, "That same train came again. It came at 2:15," that she referred to the train of cars that formed the main thread of raving at the first operation. The last flicker of consciousness at that time was the freight train that ran over her and lodged on her stomach. Off and on for an hour the patient begged of those present to take the freight train off her. Whether this same train would have figured in the second operation if the nurse had not mentioned the 2:15 train is doubtful, yet the second was certainly associated with the first in the words "That same train came again." The patient had no recollection of a train experience at the second operation, but had a very lasting one of the freight train at the first etherization.

The recollection the patient has of her "dream" while under ether this second time corresponds well, in part, to her raving which she was informed of by a physician present. The "dream" consisted of the most excruciating agony of mind and body that can be imagined. The patient was riding at a mad pace on an open vehicle, much like an open electric car, and was hanging out of the end of the seat attempting to snatch a drinking glass from the clerk stationed outside of the drugstores on the way. The idea was that the person who could obtain the last glass in the world should be the most successful person in some way or other—just how was not clear. As each glass was handed to her the clerk would say, "Throw this away and get another." It seems that at the start this competition was intended to be a harmless one, but that somebody had foreseen the fatal result and had attempted to avert it. All along the way a voice was heard, "I knew this would happen!" The world became less and less inhabited until finally the clerks had disappeared. Whatever was happening was causing the population to disappear with the glasses. At last was heard, "This is the last glass in the world," and the patient realizing that she was victorious experienced intense pleasure. However, the agony recommenced, for then she found herself in the midst of a multitude, evidently the people the competition had not carried off, and they all proved to be bitter enemies. They cried out that she and hers would not rule as had been intended, but that the punishment for her greed and harm would be the curse of

stammering. Her head was then forcibly dipped into a stream of gold which caught and held her protruded tongue, and hardened around it. Everybody then cheered and rejoiced over her misery. No agony could exceed that in which the patient was now plunged. A violent struggle was made to free her tongue, causing intense pain at the root of it. She finally succeeded in freeing it and great relief was felt, although she could not talk at first. (This was probably at the time the gag was removed from the patient's mouth). The victim said something to this effect, "I have never made fun of stammerers like other people, but have always pitied them, and don't deserve to become one myself. Haven't I always helped —— ——?" (This girl was a pupil of the patient who stuttered and stammered badly. The patient had spent many hours trying to help her).

It seems that at this point the patient's tongue had free range, for the impression was that the experience had been only a dream. She was greatly pleased with this dream, for she decided that it would make a wonderful theme for a play which she would write at once. It seemed to her to be the most unique and original theme in the world and she started immediately to form the outline. Here this part of her experience ended, though other raving continued.

The associations upon which this so-called "dream" was built are very clear in the patient's mind. All the drug stores represent a single one seen by her in childhood. All the clerks were the one in the well-known window advertisement of Moxie. They all had that penetrating gaze that followed the patient everywhere. This advertisement had always been of interest to her. The competition over the last glass in the world was traced directly to a motion picture seen in Washington, D. C., the spring previous, entitled "The Last Bottle of Champagne in the World." The stream of gold in which the patient's tongue was hardened undoubtedly referred to King Midas of mythical fame. This was a very natural association for a teacher of English. The stammering was the outcome of a research study on the subject and working with a pupil so afflicted. The patient is greatly interested in dramatics and writing plays. She has always had a desire to be a playwright, and has made one poor attempt which was staged. The inspiration under ether resulting from her terrible experience was a very natural one, as plotting scenes is a pastime for her.

Although the operation was a very successful one the patient suffered intensely for a few days from "adult pains" for which she had to take medicine. Even after these pains had disappeared the root of the tongue was extremely sore, pained at times, and was nervously annoying at all times. The patient realized that this difficulty was largely psychic, due to her ether experience, yet, though naturally a strong-willed and non-suggestible type, she could not overcome it entirely. The image of the agony experienced in extracting her tongue from the hardened gold was too strong a one to overcome.

As a result of this ether shock and "dream" while under ether, that part of the body most affected is still conscious of the experience. For two months after the operation the patient was greatly bothered by a speech defect resembling lisping. The tongue thickened and seemed tied at the root, the seat of most of the suffering, particularly in the "dream" under ether. It acted much as it does when numbed by ice cream. The general effect was that the patient had something in her mouth which interfered with tongue motion. This was of extreme annoyance but diminished gradually in frequency so that the patient was at times practically oblivious of it. For the past seven or eight months the trouble has been felt only when the patient was nervous or fatigued. She sometimes was not bothered for a week at a time, then again would feel the trouble in spells for two or three days in succession. The tongue during this tme was not so intractable as before. Now, sixteen months after the operation, the impediment is still felt occasionally when nervousness or fatigue is experienced. The trouble is much lighter in form and lasts usually for only a short period, sometimes for not more than five minutes and never for more than half an hour at a time. Two or three spells a day are uncommon, but such an annoyance has existed.

As an introspectionist, the patient has found that the defect was more prominent according as the memory or association was stronger. Now she can discuss the matter without noting any condition of suggestion. At times a faint image of pain is felt for a second at the root of the tongue, but the patient immediately combats it by an inhibition. All images of the experience are still so very vivid that the patient has little hope of ever forgetting them. The motor and visual images are stronger than the others, yet the auditory images are very

strong also. The pain image is so vivid that a little consideration would result in auto-suggestion. Every muscle and nerve in the experience could be easily called into play. It has required much study and effort to overcome this psychic impression; yet the patient feels that if she is obliged to take ether again, and a worse fate should befall her, she would be successful in mastering the difficulty.

BOOK REVIEW

Morale: The Supreme Standard of Life and Conduct. By G. Stanley Hall. N. Y., D. Appleton & Co., 1920. 378 p.

Granville Stanley Hall was born in 1846. He was the first president of Clark University, Worcester, Mass., a post graduate institution exclusively, from which post he has just retired. Sanderson Academy, Williston Seminary, Williams College, Union Theological Seminary and the usual intellectual siege in Germany comprise the rungs of his intellectual ladder. Dr. Hall never became an ordained minister although graduated from Union. He was a professor in Antioch College which was founded by Horace Mann. He then went to Harvard as an instructor in literature, and then back again to Europe to study comparative psychology. Upon his return from Europe he became professor of psychology and pedagogy in Johns Hopkins and thence to Clark, which institution was constructed to suit his tastes. Dr. Hall has written numerous books and articles of recognized standing, among which is the elaborate work *Adolescence* in two large volumes, which is generally accepted as the last word on the subject.

The purpose of "Morale" is "a plea for a new and more inclusive standard of the evolution of not only individual but of human organizations."

Not all of us are satisfied that man's chief end has been satisfactorily stated. When this end is truthfully ascertained then we will know the direction of real progress. Dr. Hall thinks he has it in the sum total of good that comes out of the experience of the World War. It is this—"to keep ourselves, body and soul, and our environment, physical, social, and industrial, always at the very tip-top of condition." These super-hygienic and super-psychic acquisitions exemplified in the power of the highest type of harmonious action constitute Morale.

Morality has to do with proper ethical conduct, usually including virtue. Morale has to do with the result of all altruistic effort, including morality and even the activities of conscience. Conscience is so subtle that its misuse necessitates codes and laws to regulate it. The prizes offered for years by the French government to boys for the best essays on moral themes were so often won by the worst boys that instead of helping the boys it developed hypocrisy, which was sufficient excuse for the discontinuance of the practice. Although conscience can and will yet do much in the world, it is no longer the supreme oracle it once was thought to be.

Conscience is one's own faculty for discerning right from wrong. Honor is accepted rules of conduct largely established by others. A slur on it makes the most cowardly boy fight, the most modest girl blush and weep, and the dread of the loss of it impels men to face death in almost any form. In the mediaeval courts of love and under the lofty ideals of King Arthur and the Round Table and the Grail, honor was discussed, idealized, defined, and codified. Honor is more elastic than conscience. In the days of the Commune a captain was being taken to the guillotine. His young wife tried to follow him. Seeing her he shouted, "Take her away; I do not know and never saw her." He knew that recognition would seal her doom also.

Was this love, or honor or both? Together they make the most precious metal that human life can produce.

The superman is a new ideal best formulated by Nietzsche, with Darwin a close second—the power to survive, to win the largest "place in the sun." For the superman pity means degeneration in the philosophy of the survival of the fittest. Christ's teaching tenderness towards the unfortunate is opposed to this idea of the superman. Not all of the philosophy of the superman is erroneous. Hegel said, "Man cannot think too highly of himself as man." This is true but not in the sense he meant it. Men are and should strive to be equal in nothing save in opportunity.

But the real superman, like the moralist, is too self conscious. The best man in the world who knows himself to be such is already spoiled by the knowledge. Even Socrates was the wisest of men only because he was most conscious of his ignorance, and the real overman, if praised by others as he thinks he deserves, becomes insufferable. The ideal superman will merge and perhaps efface himself in his cause or task; although greatest, he will be content to be thought least; he will be vastly more naïve than self-conscious, and will place the good of others before that of himself.

The three ideals: morality and conscience, honor, and the superman do not meet the needs of this new era, and the purpose of this book is to suggest a fourth, the realization of which was one of the best results of the World War. This last goal of culture is Morale, which while not entirely definable is best characterized as the cult of condition. Morale is good health, the flower of every kind of hygiene. The great religions, especially the Christian founders who strove to realize the kingdom of God, that is, of man here and now, are perhaps the world's very best illustrations of high morale. When the soldier fights with all that he ever was or did, indeed with all that his ancestors ever were or did, other things being equal it is morale that decides.

This book is a plea for nothing less than a new criterion of all human worths and values—the home, the state, the church, literature, science, industry, and every human institution, not excluding religion, and perhaps it most, rejudged and revaluated by the standard of what they contribute to individual, industrial and social morale. This would give us a new scale on which to measure real progress or regression.

The World War was, itself, the bankruptcy of the old criteria, the collapse of the world morale. It was not merely that Germany lost her old soul and the new one she put in its place proved a demon, but the other countries lost their vital touch upon present reality. As never before, each vital racial or national factor in history must get into and keep in close touch with all the rest. The day for each for itself is passed. In discussing particular items for producing morale the author gives health first place. Health means wholeness or holiness. The modern hygienist asks: "What shall it profit a man if he gain the whole world and lose his own health, or what shall a man give in exchange for his health?" The Japs in the Russian war give a good example of the first consideration to health; the American in the Cuban war was a sample of the lack of it.

From the first rumor of war and the draft on to the training camp, to the trenches, and to the charge, the chief feeling to be overcome in all men is fear. Cowardice is fear yielded to; bravery and courage are fear controlled. Fear is the anticipation of pain and mortal fear is the anticipation of death. Some men acquire a Stoic fatalism,

the Mohammedan kismet, or the Puritan will of God, which overcomes fear in a large degree.

Humor has its place in the creation of morale; especially among the Anglo-Saxon peoples and those who speak the Romance languages rather than among the Teutons whose rancor in war makes them so serious that none accuse them of jocularity. Humor is perhaps the very best camouflage for fear. Coningsby Dawson writes, "Pretty well every man I have met out here has the amazing guts to wear his crown of thorns as if it were a cap and bells." A funny man in the army is a God-send. In peace and in sickness it is often a great resource to be able to see the humorous side of things. It is, however, the new recruit who strives most desperately to be merry over cooties. The American soldiers who marched down the streets of Paris with a deadly air-raid above, carrying Japanese paper parasols as a protestation, invoked laughter from the admiring French. A boy who showed a sympathetic chaplain what seemed to be a Morocco bound New Testament in which a Hun bullet had been stopped and so saved his life, listened to a devout lesson and then showed his kind friend that it was a pack of cards instead. At one time it was thought that laughter could guard men against heterodoxy and vice by making them ridiculous, perhaps somewhat as Plato thought showing sots to the young established them in temperance, and just as the freak of the "Chaplain order" helps us against a sense of inferiority in ourselves.

General J. F. Bell said: "A songless army would lack in fighting spirit in proportion as it lacked in responsiveness to music." In a competition for a national anthem a German committee rejected 3,200 compositions. Several delightful songs became popular but none superior in increasing war morale to "The watch on the Rhine," "Battle hymn of the republic," "Scots, wha hae wi' Wallace bled," "La Marseillaise," "God save the king," or "Men of Harlech."

The library comes in for its share in the morale uplift. Every camp had its library and librarians. There were over 45,000 college men among the soldiers who demanded technical reading. Fiction, however, prevailed, with Kipling, Doyle, McCutcheon, O. Henry, Tarkington, Haggard, London, and Wells in the lead.

The slogan and the poster went hand in hand and did effective work because of their ability to take a crack at you while on the run. "Go on or under," "Have you a reason or only an excuse?," "If you don't enlist, invest," "Don't read history, make it," "Every dollar makes the Kaiser holler," "Buy a gun to beat the Hun," were some that put pep into the whole country.

The chapter on sex admits that war of all occupations of men, because it is the most exciting and strenuous, makes not only possible but imperative the highest degree of success. "None but the brave deserve the fair" may have come from this impulse. While efficiency dmands restraint in sexual matters, the soldier's very life and surroundings invite looseness of practice in this regard. This is best controlled by keeping in close touch with home and friends. Mother, sister, sweetheart, and wife, have the most effective influence in keeping the soldier loyal and pure. War is lost or won chiefly upon the development of secondary sex qualities and this principle roots deep and blossoms high. It might be justly said that wars are fought for and won by woman. Woman is nearer to the race in body and soul and is a better representative of the species than the man. She is more altruistic than egoistic. She stands for the future and is charged with the interests of posterity in a very different sense and

degree from man. The order is the ascendancy of woman as an influence politically. Woman's effect upon morale shall be a revaluation of all institutions on a basis of service for a more complete maturity.

Next in importance is the ideal soldier, who is nearer being an ideal man than is the ideal workman, scholar, farmer, savant, or the ideal man of any occupation. The soldierly attitude and bearing is the acme of alertness and readiness for action with a maximum of efficiency. Honor, which is simply ideal conduct though often codified into fantastic form, is his muse. This rule of life is more positive and ideal than the puritanical rule of conscience. It is all of duty with a large plus. The true soldier surpasses all others in team work and *esprit de corps*.

The day of all men being free and equal has been changed to the idea of a true democracy which will never commit itself to the principle of equality of men except in opportunity. Individuals differ enormously—in ability, in capacity of service, in the value of the hereditary strain that flows through them. Any political, social, or industrial organization that prevents superior men from attaining superior rewards is doomed to failure. The freer men are the less equal they become. We entered the war to make the world safe for democracy but we did far more, we made the world democratic.

We are now called to a new world leadership. The last becomes the first. Have we the "ideal" morale to see this new opportunity and to assume the new duties and responsibilities which the Muse of History now lays upon us. The labor problem, prohibition, profiteering, feminism, education, statesmanship, Bolshevism and religion are all discussed in their effect on morale. Bolshevism would displace 6,361,000 farms, of which 62% are owned by the farmers who cultivate them. The equipment and live stock is valued at $41,000,000,000; 203,000 churches; 555,000,000 acres of forest; 17,000,000 dwellings; 22,896 newspapers; 31,492 banks with their 11,000,000 depositors; 194,759 Sunday schools with 19,000,000 pupils and church property valued at over one half billion dollars would all be seized. In addition nearly forty-two million members of 227,487 church organizations would be subject to the domination of atheistic dictatorship.

After all this the author concludes with a chapter on religion and morale. He defines religion in a manner that leads one to believe he got his post-graduate work in Germany. Hall is intensely informed. What he says may not please a religionist but there is little excuse for refusing to listen, at least, even if we are not willing to pace down his good broad highway. We must not think of Hall as atheistic. He was graduated from a theological seminary. He is evidently not afraid to conduct a rigid survey of his own religious belief as well as the religious beliefs of others. His conclusion to the whole matter is thus, "Although Pandora has opened her old box and again let loose all of its evils upon mankind, we find a new hope at the bottom, namely, personal, civic, social, industrial, and religious morale, the acme of healthfulness of body and soul."

Few books have been written with greater care and preparation. Almost hundreds of books have been consulted and as many letters written to authorities. The "Catholic World" thinks it is a pity that Hall finds so little room for Christ. The "Dial" says the book is colored by a Freudian trend of philosophy, although it is adapted to any one concerned with studying or directing the rest of the race. The "Nation" says it appears to be the product of what he calls exuberant, euphorious, and eureka movements, while the "New York

Times" says, "No writer of modern times has so completely freed himself from every vestige of scholastic methods, nor dared so freely to apply to religion, ethics, education, and social reconstruction, every last and newest product of the different aspects of psychology."

Dr. Hall's style is peculiarly stimulating, refreshing, and invigorating. Paul Shorey in the "Review of Reviews" justly says: "To speak seriously, these vivacious lectures are the readable improvisations of a clever ready writer who possesses a facility of association that Emerson would have envied, but who persistently overworks and overloads his faculty or facility with undigested reminiscences of his German studies and his subsequent dabblings in all the sciences and all the philosophies."

The advertisement says that Morale is the standard by which to measure all human institutions and human conduct. Most of us prefer to select our own square for ascertaining the measurements that affect our destiny. The "Springfield Republican" says there is no ground work of a new ethics or a new sociology in this work, as is true of other books of Dr. Hall's. He traces the history of morale as it has existed in the past, giving a detailed account of how it was built up during the World War. He shows that it has been the most precious result produced by the conflict, and points out how it must and can be preserved.

The views that Dr. Hall expresses will cause both radicals and conservatives to question their uncompromising attitudes.

We think of Democracy as a fact accomplished. Not so, it is an ideal. For this ideal our armies fought the fight that "was damn dull, damn dirty, and damn dangerous." The new and longer conflict is the carrying out of the experiment of the new ideal. This conflict will be bitterly contested. The heroes in the first war, many of them, will fail in the fight for the perpetuity of world democracy. Many a citizen whose son gave his blood for democracy across the water will wittingly or unwittingly defeat democracy at home. "Peace hath her victories no less renowned than war." But the power of the new Morale will prevail, and throughout the Grand Army of our Republic truth will stand the last test of those great words of Whitman's:

> Wert capable of war—its tugs and trials?
> Be capable of peace, *its* trials;
> For the tug and mortal strain
> Of nations come at last in *peace*—not war.

WILLIAM F. STEVENS

BOOK NOTES

The Management of Men. By Edward L. Munson. N. Y., Holt, 1921. 801 p.

The author of this book will be remembered as the man whose signal paper on Morale led to the establishment of a special camp in which his theories were put into actual practice. The purpose of his book is to show that the management of men is a science "whereby mental state and human behavior can be comprehensively and effectively controlled by the scientific application of the fundamental laws governing human nature itself." Accordingly, he treats first of the general principles of morale control, later of the basic instincts of man, his psychological qualities, the factors which affect morale, the functioning of the morale organization, leadership, education, recreation, special problems of personnel, health in relation to mental state, reward, punishment, delinquency, industrial morale, etc.

The author makes no claim to a knowledge of technical psychology, and the book contains almost no references to literature but is a fresh contribution from an original lay standpoint which cannot fail to have a wholesome tendency to bring psychology back to common sense.

Psychoanalysis and the Unconscious. By D. H. Lawrence. N. Y., Seltzer, 1921. 120 p.

The author discusses here the relation of psychoanalysis to morality, of the incest motive to idealism, describes the birth of consciousness, the child and his mother, the lover and the beloved, and discourses in the last chapter on human relations and the unconscious.

It is difficult to understand his standpoint or to appreciate the affected sprightliness of his style. We are told that "the aim of this little book is merely to establish the smallest foothold in the swamp of vagueness which now goes by the name of the unconscious." He tells us that it is the active spontaneity which arouses in each individual organism at the moment of fusion of the parent nuclei and which in polarized connection with the external universe gradually evolves and elaborates its own individual psyche, and comes bringing both mind and body forth from itself." This will suffice to justify the publisher's claim that the book is an "entirely original contribution, a discovery as amazing to the layman as Einstein's relativity theory," etc.

The Belief in God and Immortality. By James H. Leuba. Chicago, Open Court, 1921. 334 p.

This is a new edition of the author's epoch-making work, first published in 1916, which then attracted great attention. Save for an eight-page introduction correcting certain minor misconceptions of his theory, this edition is unchanged from the first.

Rhythm, Music, and Education. By EMILE JAQUES-DALCROZE. N. Y., Putnam, 1921. 334 p.

At last this creative and original mind has come forward with an account of his system of dancing and the philosophy which underlies it, although there is too little of the latter. His book is largely made up of descriptions of various pageants, all of which are illustrated by many photographs. The author's theories of the relations of rhythm, time, and temperament are interesting and even stimulating, although they can hardly yet be called convincing to the psychologist.

Naval Lessons of the Great War. By TRACY B. KITTREDGE. N. Y., Doubleday, Page, 1921. 472 p.

This book, with an introduction by Rear Admiral B. A. Fiske, "is a record of official testimony given to Congress by navy officers under oath. It shows that the principal naval lesson of the war is the menace to the national honor and safety involved in committing the management of the navy to unworthy hands." The book "shows that Secretary Daniels was so far below this standard that the navy would have been caught wholly unprepared when we entered the war, and would have been ineffective during the war, if certain navy officers had not sacrificed or endangered their positions by putting through important measures without his knowledge."

The Teaching of History in Junior and Senior High Schools. By ROLLA M. TRYON. Boston, Ginn, 1921. 294 p.

This book is written in the interest of better history teaching and is to be used, for the most part, with everyday classroom problems. Its chapters tell us how to train pupils to study, special methods, how to proceed with lecture and textbook, written work, term papers, planning the course and lessons, etc.

Present-Day Problems in Religious Teaching. By HETTY LEE. A book on methods of religious teaching for teachers, parents, and training college students. London, Macmillan, 1920. 176 p.

The author tells us that the aim of this book is to provoke thought. She discusses the gospel stories in the light of to-day, the Old Testament stories in the light of higher criticism, the problem of memory-work and modern educational methods, of prayer and reverence in school life, the Christian method in education, and the child's unrealized universe. The author's attitude toward present-day religious education is critical and negative but her belief in the possibilities of something yet higher is unbounded.

A New System of Scientific Procedure. By G. SPILLER. London, Watts, 1921. 441 p.

The author begins the very preface of his book by telling us that he wishes his paper regarded as an attempt at a modern re-statement of Bacon's *Novum Organon,* and believes he represents an undertaking infinitely greater in our day than it could possibly have been in that of Bacon. His work is divided into two parts, theory and practice. In the first he states the problem and defines its terms, and in the second describes what he calls the preparatory and then the working stage, and discusses generalizations and conclusions concerning conclusions. In the last part he gives us his general conclusions on the subject.

The Philosophical Writings of Richard Burthogge. Ed. by MARGARET W. LANDES. Chicago, Open Court, 1921. 243 p.

This work is published in the hope of securing for Burthogge, a "seventeenth-century English philosopher so free from the prepossessions of his Platonist contemporaries that he 'grounds notions' in sense," the place that he deserves but has never held in the history of British thought. His chief work is entitled, "A Discourse of Reason and Truth" (1678).

Life Eternal. By BARTHELEMY P. ENFANTIN. Tr. by FRED ROTHWELL. Chicago, Open Court, 1920. 138 p.

The author was one of the founders of Saint-Simonism and was born in Paris in 1796. His thesis was that the golden age, which had been thought to be in the past, was really in the future. He was a seer and mystic whose ideas had a great influence upon all with whom he came in contact.

Seneca's Octavia. With introduction and notes by CLARA L. THOMPSON. Boston, The Stratford Co., 1921. 77 p.

The Teaching of Geography. Emphasizing the Project, or Active, Method. By MENDEL E. BRANOM. Boston, Ginn, 1921. 292 p.

Fundamentals of High-School Mathematics. A textbook designed to follow arithmetic. By H. O. RUGG and J. R. CLARK. Yonkers, World Book Co., 1920. 368 p.

Practical Study of French Pronunciation. By LOUIS TESSON. Boston, The Four Seas Co., 1920. 79 p.

Making a High School Program. By MYRON W. RICHARDSON. Yonkers, World Book Co., 1920. 27 p.

American Apprenticeship and Industrial Education. By PAUL H. DOUGLAS. (Columbia U. Studies in Political Science, vol. xcv, No. 2), 1921. 348 p.

A History of Public-School Support in Minnesota 1858-1917. By FRANCES E. KELLEY. Minneapolis, U. of Minnesota, 1920. 103 p.

A History of the Teaching of Chemistry in the Secondary Schools of the United States. By SAMUEL R. POWERS. Minneapolis, U. of Minnesota, 1920. 68 p.

Analytic Study of a Group of Five and Six-Year Old Children. By CLARA H. TOWN. Iowa City, Un. of Iowa, 1921. 87 p.

Growth During School Age. Its Application to Education. By PAUL GODIN. (Tr. by SAMUEL L. EBY.) Boston, Badger, 1920. 268 p.

Give Yourself a Fair Start. Publ. by Board of Education of Cleveland, 1920. 47 p.

Statistics of City School Systems, 1917-18. Prepared by the Statistical Division of the BUREAU OF EDUCATION. Washington, Govt. Printing Office, 1920. 477 p.

Die Berufseignung des Damenfriseurs. By R. W. SCHULTE. Leipzig, Barth, 1921. 77 p.

Untersuchungen über die Fehlleistungen beim Maschinenschreiben. By WILHELM HEINITZ. Leipzig, Barth, 1921. 17 p.

Die Festellung der psychischen Berufseignung und die Schule. By ERICH STERN. Leipzig, Barth, 1921. 153 p.

Zur Psychologie des Amputierten und seiner Prothese. By DAVID KATZ. Leipzig, Barth, 1921. 118 p.

Das frühzeitige Auftreten der Begabung und ihre Erkennung. By GEZA REVESZ. Leipzig, Barth, 1921. 37 p.

Abzählende Methoden und ihre Verwendung in der psychologischen Statistik. By OTTO LIPMANN. Leipzig, Barth, 1921. 77 p.

Dr. Klages' Entwurf einer Charakterkunde. By OSKAR HERMANN. Leipzig, Barth, 1920. 63 p.